

## CHAPTER 3

### THE ENVIRONMENT: WHAT'S THERE NOW AND PROJECT EFFECTS

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This chapter presents an analysis of the potential effects of the Practical Alternatives for the United States Blue Water Bridge Plaza on people and the environment. Members of the Study Team, including planners, engineers, scientists, and biologists, completed studies of the different potential effects of the alternatives. A summary of these studies is presented here. For several of the potential effects, Study Team members completed detailed technical reports. A list of the technical reports completed for the study is found in **Appendix A** and the reports are available upon request.

The analysis for each of the potential effects is made up of three parts.

- A brief discussion of the methods used in the analysis
- A discussion of the existing conditions in the Study Area to provide background information
- The analysis of the potential effects of the No-Build Alternative, City East Alternative, City West (Preferred) Alternative, and Township Alternative

A map of the Study Area and exhibits of the Alternatives are contained in **Appendix E**, which is a separate volume that accompanies this DEIS. These exhibits can be referred to while reading the analysis of the potential effects of the Alternatives.

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#### What are Potential Effects?

Potential effects are impacts or changes that could occur as a result of proposed improvements. The effects may be ecological, aesthetic, historic, cultural, economic, social, or health related. Examples might include how increased noise levels from traffic flow would affect nearby residents, or how the filling of wetlands as part of the construction of a new plaza would affect local habitat.

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#### What is a Technical Report?

A technical report focuses on an environmental topic of concern such as noise, air quality, wetlands, or other built or natural resources. It presents a detailed analysis of the existing conditions for that environmental issue and discusses how the project alternatives may affect that particular area of concern. It often includes recommendations on how to best avoid or minimize adverse effects to that particular part of the environment.

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### 3.1 Land Use and Zoning

This section discusses the existing land use and zoning conditions within the Study Area and examines the impacts and compatibility of the alternatives on existing and future land uses. The Study Area is located in the northern part of the City of Port Huron and Port Huron Township, in St. Clair County, Michigan. The Black River serves as a boundary between the two jurisdictions in the Study Area. The City West Preferred Alternative and City East Alternative would mostly affect land uses in the City of Port Huron. The Township Alternative would affect land uses in the City of Port Huron and Port Huron Township. **Figure E.20 on page E-29 of Appendix E** illustrates the planned land uses in the Study Area.

Local Planning Documents: The City of Port Huron completed a Comprehensive Plan in early 2003. The Comprehensive Plan included mapping of existing land uses and a zoning map. The City also has a Zoning Ordinance that was updated in 2004. The Charter Township of Port Huron adopted a Zoning Ordinance and Regulations to guide development within the Township. The Zoning Ordinance also includes a zoning map.

The City of Port Huron Comprehensive Plan Summary describes the Blue Water Bridge as “an important gateway” and states that “Port Huron should contribute to enhancing the efficiency and beauty of this important transportation element.”<sup>1</sup> The St. Clair County Master Plan describes the the Blue Water Bridge as “a unique and key element in St. Clair County’s transportation network...” and recognizes that substantial commercial traffic growth will continue to occur with the opening of the second span.<sup>2</sup> Attendance at Blue Water Bridge Plaza Study meetings was part of the preparation for the St. Clair County 2030 Long Range Transportation Plan which states that “the Blue Water Bridge Plaza is under further study and may expand its current facilities to meet ongoing needs for both customs and



Residential Land Uses in City  
of Port Huron



Residential Land Uses in Port  
Huron Township

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<sup>1</sup> City of Port Huron Comprehensive Plan Summary (2003), Chapter 7: Transportation, 58.

<sup>2</sup> St. Clair County Master Plan (2000), Pages 70, 90.

traffic...this gateway will remain a critical access point for passenger and freight traffic..."<sup>3</sup>

### 3.1.1 What are the Land Uses in the Study Area?

Both the City of Port Huron and Port Huron Township have zoning ordinances that were updated in 2004. There are various land uses within the Study Area. These land uses include single-family residential, multiple family residential, commercial, and public facilities. The following sections describe the Study Area land uses and the existing local planning documents guiding future land uses.

**Table 3.1.1** lists the existing land uses in the City of Port Huron, Port Huron Township and St. Clair County.

**Table 3.1.1 Existing Land Use in Study Area Communities**

Land Use Type	City of Port Huron (acres)	Port Huron Township (acres)	St. Clair County (acres)
Single-Family	2,601 (50%)	2,681 (32%)	61,868 (13%)
Multiple-Family	229 (4%)	26 (0%)	659 (0%)
Commercial and Office	544 (10%)	195 (2%)	3,072 (1%)
Institutional	500 (10%)	178 (2%)	2,026 (0%)
Industrial	630 (12%)	390 (5%)	4,276 (1%)
Transportation, Communication, and Utility	128 (2%)	650 (8%)	7,102 (2%)
Cultural, Outdoor Recreation, and Cemetery	302 (6%)	368 (4%)	4,458 (1%)
Active Agriculture	0 (0%)	256 (3%)	242,034 (52%)
Grassland and Shrub	150 (3%)	1,556 (19%)	50,882 (11%)
Woodland and Wetland	38 (1%)	1,759 (21%)	82,714 (18%)
Extractive and Barren	0 (0%)	0 (0%)	1,793 (0%)
Water	104 (2%)	181 (2%)	1,835 (0%)
Under Development	20 (0%)	147 (2%)	1,386 (0%)
<b>Total Acres</b>	<b>5,246</b>	<b>8,387</b>	<b>464,105</b>
Source: SEMCOG Community Profiles at <a href="http://www.semco.org">www.semco.org</a> . Data for 2000.			

<sup>3</sup> St. Clair County 2030 Long Range Transportation Plan (2004), Page 24.

Both developed and undeveloped land can be found in the Study Area. Developed lands are primarily found east of the Lapeer Connector interchange with I-94/I-69 and continue east to the St. Clair River, including parts of Port Huron Township and the City of Port Huron. These developed lands include various land uses, including residential, commercial, and recreational.

Undeveloped lands are generally found west of the Lapeer Connector in Port Huron Township. Existing undeveloped lands are either wooded or open fields including a large tract of vacant land directly north and east of the MDOT maintenance facility located on I-94/I-69. Existing and planned land uses in the Study Area are very similar with the exception of the proposed plaza location site for Township Alternative. This location is currently open space but is planned for residential use.

Study Area Land Uses: In order to adequately describe existing land uses in the Study Area, the corridor was divided into three general geographic areas:

- The I-94/I-69 Interchange east to the Lapeer Connector (Port Huron Township)
- The Lapeer Connector to the Black River (Port Huron Township)
- East of the Black River (City of Port Huron)

I-94/I-69 Interchange – Lapeer Connector: The I-94/I-69 Interchange to the Lapeer Connector area is generally undeveloped with some areas of development in close proximity to the interstate. Undeveloped land in this corridor is either wooded or in open space uses. Most of the existing development occurs along Lapeer Road focusing on community services rather than highway services. A large MDOT maintenance facility is located adjacent to and south of the existing eastbound lanes of I-94/I-69 and a manufactured housing residential area is located west of the interstate and north of Lapeer Road. Other areas of development in this corridor include single-family housing and a church campus, all located south of West Water Street and north of an existing open field adjacent to the interstate. The Chippewa and Central Middle Schools properties are located on the southern



Open Space in Western Part  
of Study Area



Chippewa Middle School

edge of the Study Area in Port Huron Township, west of the Lapeer Connector.

The Zoning Ordinance and Map for Port Huron Township provides guidelines as to how these lands will likely be developed now and in the future. Existing zoning districts in this part of the Study Area include:



Stocks Creek Manufactured Housing Complex

- R-1 One Family Residential – Located north of the interstate and generally allows for family residential development.
- RMH Manufactured Housing – Encompasses the existing manufactured housing area directly west of the interstate and generally allows for manufactured housing developments.
- B-2 Community Business – Located north and south of Lapeer Road and generally allows for commercial development that offers a broad range of goods and services.
- RM-1 Multiple Family Residential – Located south and east of the interstate and generally allows for single family dwellings, town homes, apartments, and row homes.
- PSP Public/Semi-Public – Located immediately southwest and adjacent to the I-94/I-69/Lapeer Connector ramps.

The existing Zoning Ordinance for the Township has designated undeveloped land in the Study Area suitable for low-density residential (R-1) development.



Bridge Harbor Marina

Lapeer Connector – Black River: The Lapeer Connector to Black River corridor area contains both developed and undeveloped/recreational lands. This part of the corridor contains the Water Street interchange with I-94/I-69, where a Michigan Welcome Center is located between the westbound off ramp and the westbound freeway lanes. A large privately owned marina is located immediately south of and adjacent to the eastbound interstate between Black River and Water Street. An established commercial area south of the interstate runs parallel to the interstate between the Lapeer Connector and Water Street. North of the interstate, a public campground is located directly adjacent to the Lapeer Connector ramps from the Water Street interchange. A

township park/open space is found directly west of the Black River on the north side of the interstate.

The Port Huron Township Zoning Map indicates that existing zoning districts in this part of the Study Area include:

- B-3 General Business – Abutting the southern edge of the Right-of-Way (ROW) and north of the Water Street interchange and generally permits intensive commercial development including auto-oriented districts. Undesirable impacts generated by uses in this district render it inappropriate to locate residential uses adjacent unless extensive buffering is provided.
- PSP Public/Semi-Private – Located east and west of the Water Street interchange encompassing the existing campground and open space abutting the Black River and generally reserved for open space, greenbelts, and wooded areas.

East of Black River: The portion of the Study Area located east of the Black River is entirely within the City of Port Huron. This area is entirely developed, with no designated open space or vacant land adjacent to the existing plaza. There are two primary land uses in the vicinity of the plaza: low-medium density residential and medium density commercial. Generally, residential areas next to the plaza to the north and south contain pre-1950s housing. Institutional land uses surrounding the existing plaza consist of MDOT facilities, a Detroit Edison substation, and several churches.



Condominiums West of the Existing Plaza

The City of Port Huron Zoning Map indicates that the existing zoning districts in this part of the Study Area are:

- R-1 1&2 Family Residential – Located in all residential areas north and south of the existing plaza and includes both single family and two-family (duplex) developments.
- A-1 Multifamily Residential – Small district located immediately adjacent to Blue Water Gateway business district north of the plaza and generally allows lower-density multifamily developments such as apartments, town homes, and small scale condominium developments.





**Existing Blue Water Gateway Business District**



**Business in Blue Water Gateway Business District**



**Pine Grove Avenue Mixed-Use Area**

- C-1 Commercial – Located north and south of the existing Blue Water Bridge Plaza and contains both Blue Water Gateway and Pine Grove Avenue Mixed Use Districts – allows a wide range of commercial developments, including simple neighborhood services to regional shopping attractions.

The City of Port Huron Comprehensive Plan identified two commercial districts in the vicinity of the existing plaza as areas that are slated for enhancement. The City of Port Huron Comprehensive Plan Summary proposes to “create a Blue Water Gateway Business District that offers businesses that serve travelers crossing the USA/Canada border a high quality entrance to the community”<sup>4</sup> and states, “to best serve motorists, uses within this district need to be auto-oriented including drive-through and sit-down restaurants, gas stations, car washes, groceries, and convenience stores.”<sup>5</sup> This district will build on the existing commercial land uses located north of the existing plaza. Enhancements to the district could include cohesive building designs, welcoming gateway treatments, and better signage. Currently, this area is an auto-oriented business area, which includes multiple gas stations and fast food restaurants as well as a bowling alley, a hotel, a car dealership, and the existing duty free store.

The City of Port Huron Comprehensive Plan describes the Pine Grove Avenue Mixed-Use Area as a separate land use category established to guide development along Pine Grove Avenue between Harker and Whipple. The area is to serve as a transition between the Blue Water Gateway Area and the downtown. Improvements are encouraged that would attract visitors into the nearby downtown area and promote high-quality development. Encouraged uses include neighborhood commercial, office, and medium and high density residential. This business area currently consists of a mix of gas stations, car dealerships, professional and para-professional offices (dentists, physiotherapists, real estate agents, etc.), and service businesses (heating and cooling, cell phone providers, etc.). It is generally aimed at serving the

<sup>4</sup> City of Port Huron Comprehensive Plan Summary (2003), Appendix 9: Implementation, Page 3.

<sup>5</sup> City of Port Huron Comprehensive Plan Summary (2003), Appendix 3: Land Use, Page 17.

surrounding neighborhoods with local service businesses and offices.

### **3.1.2 How Will the Alternatives Affect Land Use?**

The following sections discuss the impacts of the alternatives on land uses within and adjacent to the Study Area. The compatibility of the alternatives with local zoning ordinances is also discussed. Potential impacts to land uses in communities outside the Study Area are discussed in **Section 3.7 Indirect and Cumulative Impacts**.

*Assumptions and Methodologies:* The Study Team analyzed local land use plans and zoning ordinances for the communities located in the Study Area. Meetings were held with local officials to discuss land use and zoning impacts of the alternatives. Local units of government consulted include: The City of Port Huron, Port Huron Township, St. Clair County, and the Southeast Michigan Council of Governments (SEMCOG). The discussion of land use and zoning compatibility is based on the planning and development data and future land use plans available at the time of the analysis.

*No-Build Alternative:* The No-Build Alternative would have few impacts on land use policies and decisions within the Study Area. Future land use plans by both the City of Port Huron and Port Huron Township anticipate that the Blue Water Bridge Plaza would continue to function as-is and in its current location. As a result, the plaza would have no impact on those policies. Existing land uses would not be impacted because the plaza would maintain its current footprint and would not encroach upon adjacent development. Increased plaza congestion along with the associated potential noise and air quality issues may impact adjacent residential areas but are unlikely to cause widespread conversion to other land uses.

The increases in local traffic expected by 2030 would likely result in major bottle necks and queues at several intersections which will ultimately cause gridlock in the entire network. This could impact access to local businesses.

*City East Alternative:* The expansion of the existing Blue Water Bridge Plaza at ground-level would impact existing residential



and commercial development within the City of Port Huron. The proposed ground level plaza would encompass an area roughly bordered by the existing M-25 Connector on the west, Hancock Street on the north, 10<sup>th</sup> Avenue on the east, and both sides of Scott Avenue on the south. This area currently contains functioning residential and commercial land uses. Residential areas both north and south of the existing plaza would be impacted, resulting in relocations. The condominiums east of the Black River and north of the interstate would be converted to open space for expansion of the Black River Bridge and freeway. In Port Huron Township, existing open space would be converted for use as an MDOT Welcome Center. This land is currently designated for residential use.

The City East Alternative would absorb the majority of the Blue Water Gateway business district through the plaza expansion, also resulting in the displacement of businesses. Much of the existing Pine Grove Avenue Mixed Use Area would be impacted as well. The relocation of Pine Grove Avenue and related improvements would result in the displacement of several blocks adjacent to the roadway west and south of the proposed plaza expansion. Businesses may be interested in relocating as close as possible to the new plaza to remain within or close to designated business districts which could result in the conversion of the homes immediately surrounding the plaza to business sites. The zoning in this area would need to be changed in order to support business activities.

*City West (Preferred) Alternative:* The expansion of the Blue Water Bridge Plaza at ground level will have similar land use impacts as the City East Alternative on a slightly smaller scale. Improvements to the plaza will impact existing residential and commercial development within the City of Port Huron. The proposed plaza would encompass the area from M-25 Connector on the west, Hancock Street to the north, 10<sup>th</sup> Avenue on the east and Scott Avenue on the south. Land use categories located in this area include commercial and residential. Residential areas north and south of the plaza would be impacted and would result in relocations. The condominiums east of the Black River and north of the interstate would be converted to open space for expansion of

the Black River Bridge and freeway. In Port Huron Township, existing open space would be converted for use as an MDOT Welcome Center. This land is currently designated for residential use.

The Preferred Alternative will also absorb a substantial part of the Blue Water Gateway business district which will result in the displacement of businesses. This alternative will also affect the Pine Grove Avenue Mixed Use Area. The rerouting of Pine Grove would also result in the displacement of several blocks located directly west and south of the proposed plaza expansion. Conversion of homes to businesses directly surrounding the plaza may occur if businesses are interested in relocating within close proximity of the plaza. If this occurs the zoning in this area would need to be changed.

*Township Alternative:* The Township Alternative has several possible impacts and implications for existing and future land use planning in the Study Area. The Township Alternative would relocate the existing plaza from its current site in the City of Port Huron to the open space north of the existing MDOT maintenance facility and interstate in Port Huron Township. As a result, the Township Alternative would have potential impacts to existing land uses as follows:

- Existing open space designated for residential use would be converted for use as a ground-level plaza, including commercial truck parking.
- Existing single-family housing and the church campus immediately adjacent to the existing open space would likely be impacted.
- The MDOT maintenance facility would be relocated and incorporated into the proposed plaza.
- The condominiums east of the Black River and north of the M-25 Connector ramps would be converted for lane expansions.
- Existing businesses and residences along the west side of Pine Grove Avenue and south of the existing Blue Water Bridge Plaza would be converted to accommodate lane



**The Township Alternative  
would convert open space  
into plaza use**

expansions and improvements to Pine Grove Avenue and the Pine Grove/Scott Avenue intersection.

- Existing businesses adjacent to westbound lanes of Hancock Avenue between the M-25 Connector and Pine Grove Avenue would be impacted due to improvements to the M-25 Connector, Hancock Street, and Pine Grove Avenue. (Impacts are discussed further in **Section 3.7 Indirect and Cumulative Impacts.**)

### **3.1.3 Are the Alternatives Consistent with Local Zoning and Ordinances?**

Current zoning and future land use planning guidelines for the City of Port Huron and Port Huron Township demonstrate how land within the Study Area can be developed now and in the future. The following zoning categories are located within the Study Area:

#### City of Port Huron:

R-1 – One family residential  
A-1 – Multi-family residential  
C-1 – Commercial

#### Port Huron Township:

B-2 – Community Business  
B-3 – General Business  
R-1 – Single Family Residential  
RM-1 – Multiple Family Residential  
PSP – Public/Semi-Public  
RMH – Manufactured Housing

No-Build Alternative: The No-Build Alternative would be consistent with local planning in the City of Port Huron and Port Huron Township. This alternative would have no impacts on land use policies and zoning within the Study Area.

City East Alternative: The current and planned zoning and land uses in the Study Area are not consistent with the needs of the City East Alternative. This alternative involves the expansion of the existing Blue Water Bridge Plaza at ground

level essentially affecting the residential and commercial establishments in the area. The proposed plaza and transportation related land uses would not be compatible with the local plans for the blocks it affects. The City of Port Huron Zoning Ordinance restricts residential properties to 2.5 stories and commercial properties to three stories. Any plaza facilities exceeding these height requirements would not be compatible with the zoning ordinance.

City West (Preferred) Alternative: The Preferred Alternative like the City East Alternative is not consistent with current and planned zoning and land uses within the Study Area. This Alternative will affect commercial and residential establishments with the expansion of the existing Blue Water Bridge Plaza down to ground level. The proposed plaza and transportation related land uses would not be compatible with the local plans for the blocks it affects. The City of Port Huron Zoning Ordinance restricts residential properties to 2.5 stories and commercial properties to three stories. Any plaza facilities exceeding these height requirements would not be compatible with the zoning.

Township Alternative: The Township Alternative would not be consistent with current and planned land use practices within the Study Area. Areas within this alternative that would need to be rezoned are R-1 (one family residential) and B-3 (general business). Current open space zoned for residential use along the west side of Pine Grove would be absorbed by the expansion and would therefore require zoning changes. The proposed plaza is not compatible with the current residential zoning in this area. The Port Huron Township zoning ordinance has a maximum allowable height of 2.5 stories in business zones and two stories in residential zones. Any plaza facilities exceeding these height requirements would not be compatible with the zoning ordinance.

The Port Huron Township zoning ordinance has maximum allowable noise and glare levels for certain districts. Noise impacts from a proposed new plaza in Port Huron Township are discussed in **Section 3.10 Noise**, while lighting levels and glare are discussed in **Section 3.8 Aesthetic and Visual Impacts**.

## 3.2 Community and Neighborhood Impacts

This section discusses how the Alternatives would affect the local residents, neighborhoods, and community facilities. The section begins by providing a profile of the Port Huron Area and the Study Area. It explains who lives in the community, how they travel, and where schools and other community facilities are found. The last part of this section explains how the proposed plaza alternatives would affect the neighborhoods and community facilities.

### 3.2.1 Description of the Existing Communities and Neighborhoods

The Study Area is located north of downtown Port Huron around the existing Blue Water Bridge Plaza and along I-94/I-69 in Port Huron Township. **Figure E.1**, located in the separate **Appendix E** volume, provides a map of the Study Area.

For the community analysis, the blocks surrounding the existing plaza in the City of Port Huron are referred to as the On-site Study Area. This area includes a mixture of businesses including restaurants, gas stations, and professional offices. The On-site Study Area includes a number of established lower-middle class neighborhoods consisting mainly of single family homes built primarily between 1900 and 1950. **Section 3.1 Land Use and Zoning** contains further discussions of the land uses in the Study Area. The existing plaza and the M-25 Connector serve as dividing points between neighborhoods located to the south, east, and west of the plaza. No active neighborhood associations were identified in the On-site Study Area.

The portion of the overall Study Area in Port Huron Township is referred to as the Off-site Study Area in this community analysis. This area includes the group of businesses at the Water Street Interchange and the neighborhoods off of Maywood Drive, Eastland Road, Westland Road, and West Water Street that surround the potential plaza site for the Township Alternative. The businesses at the Water Street Interchange include gas stations, restaurants, and hotels. The neighborhoods surrounding the potential plaza site for the



Location of On-site and Off-site Study Areas



Homes in the Neighborhood Surrounding the Existing Plaza

Township Alternative consist primarily of middle-class homes built in the past 25 years. There is a manufactured housing residential community located west of the I-94/I-69 highway, just north of Lapeer Road. This community will not be affected by the build alternatives. No active neighborhood associations were identified in the Off-site Study Area.

Homes located in the blocks next to the boundaries of the Study Area were included in the neighborhood and community analysis to ensure that impacts on neighborhoods slightly further away from the alternatives were considered.

### **3.2.2 How Was a Community Assessment of the Existing Community Developed?**

The Study Team used information from the United States Census Bureau, the Southeast Michigan Council of Governments (SEMCOG) and other resources to develop a general profile of the residents in the Blue Water Bridge Plaza Study Area. Information on age, race, and income are displayed in the charts and tables that follow in this section.

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#### **What is Considered a Block?**

A block refers to a census block which is made up of one or more actual neighborhood blocks depending on the density of the local population.

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The Study Team looked at population information for the blocks in the Study Area, the City of Port Huron, Port Huron Township, St. Clair County, and the State of Michigan. Site visits and meetings with local officials, stakeholders, residents and business owners in and surrounding the Study Area were also conducted. A listing of these meetings is included in **Chapter 6 Public and Agency Coordination**.

The Study Area was divided into two parts to allow the Study Team to examine the effects of the proposed plaza for each of the alternatives. The On-site Study Area, which is the location for the plaza for the City East and City West Alternatives, consists of 29 census blocks in the City of Port Huron. The Off-site Study Area for the Township Alternative plaza, to be located in Port Huron Township, consists of five census blocks. The City East and the City West Alternatives include improvements to I-94/I-69 in Port Huron Township and the Township Alternative includes local road improvements near the existing plaza. The Study Team considered these roadway improvements in the analysis of community impacts.



### 3.2.3 Who Lives in the Port Huron Area and the Study Area?

Based on information obtained from the 2000 United States Census, the Study Team compared the populations affected by the alternatives. The 29 census blocks that comprise the On-site Study Area, located within the City of Port Huron, include 1,311 residents.

The Off-site Study Area, located in Port Huron Township, has a population of 640 residents located within five census blocks.

Within the On-site Study Area and the Off-site Study Area the two largest minority groups are African-Americans and Hispanic or Latinos. A detailed discussion on minority populations within the Study Area can be found in the Environmental Justice Section of the DEIS (**Section 3.3 Environmental Justice**).

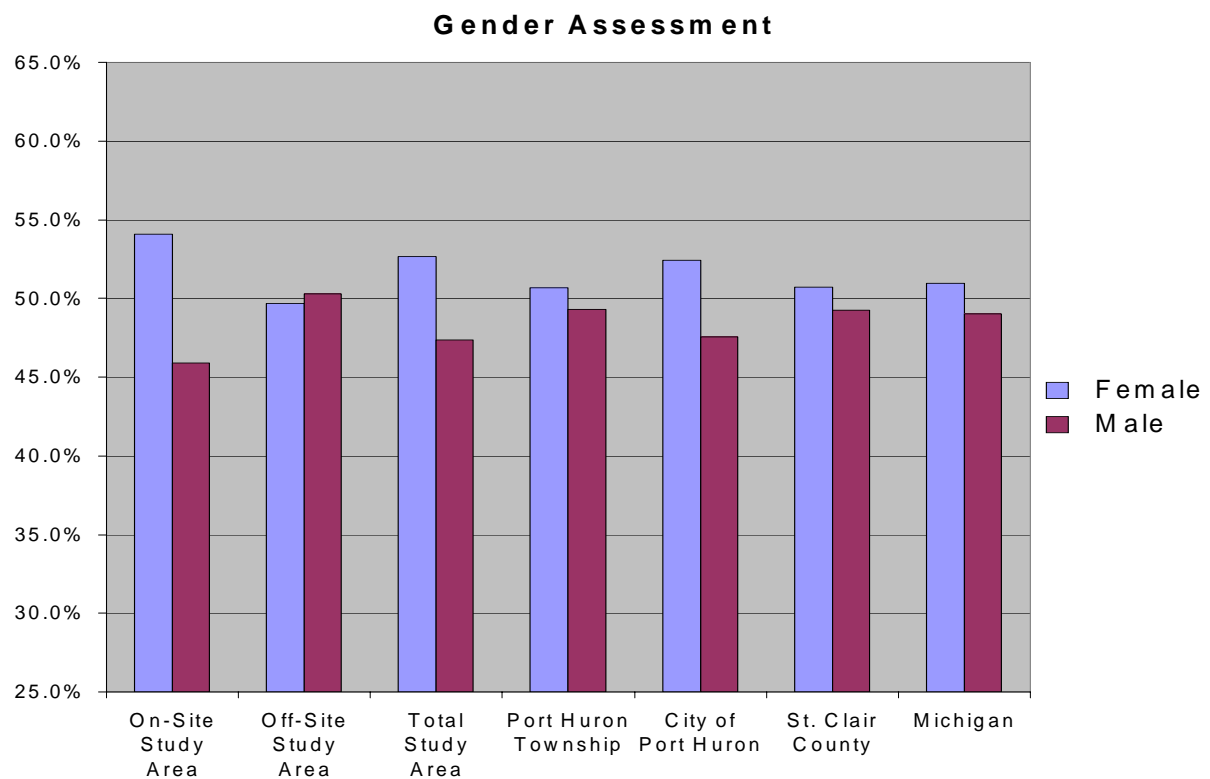
Age and Gender: **Table 3.2.1** and **Figures 3.2.1** and **3.2.2** show the age and gender profiles for the Study Area, the City of Port Huron, Port Huron Township, St. Clair County, and the State of Michigan.

The On-site Study Area surrounding the existing plaza has a higher percentage of females (54.1 percent) than males (45.9 percent). The Off-site Study Area has close to an equal number of females and males. The population of the On-site Study Area is generally younger than the Off-site Study Area. The On-site Study Area has a higher percentage of children than the Off-site Study Area, the City, the Township, the County, and the State. The Off-site Study Area has a higher percentage of people over 65 than the On-site Study Area, the City, the Township, the County, and the State. In both cases the differences are less than ten percent, however, it does indicate there are more families with children in the blocks around the existing plaza and more seniors in the potentially affected parts of Port Huron Township.

**Table 3.2.1 Age and Gender Assessment**

Population Characteristics	On-Site Study Area	Off-Site Study Area	Total Study Area	Port Huron Township	City of Port Huron	St. Clair County	Michigan
<b>Total Persons</b>	1,311	640	1,951	8,615	32,338	164,235	9,938,444
<b>Under 18</b>	28.2%	22.0%	26.2%	25.8%	27.0%	26.8%	26.1%
<b>18 to 64</b>	59.1%	63.0%	60.4%	61.7%	59.0%	61.0%	61.6%
<b>65 and older</b>	12.7%	15.0%	13.4%	12.5%	14.0%	12.2%	12.3%
<b>Female</b>	54.1%	49.7%	52.6%	50.7%	52.4%	50.7%	51.0%
<b>Male</b>	45.9%	50.3%	47.4%	49.3%	47.6%	49.3%	49.0%
<b>Households</b>	500	268	768	3,310	12,961	62,072	3,785,661

Source: U.S. Census Bureau, Census 2000



**Figure 3.2.1 Gender Assessment**

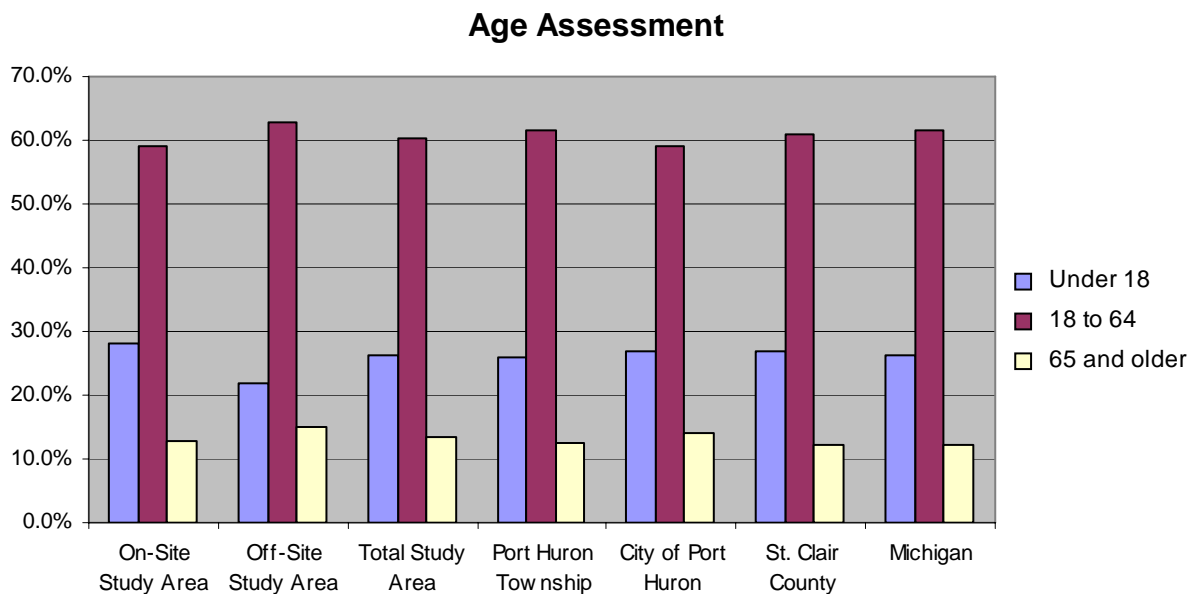


Figure 3.2.2 Age Profile

### 3.2.4 What are the Economic Characteristics of Study Area Residents?

This section discusses the income levels, home ownership rates, and the values of homes in the Study Area (see **Table 3.2.2**, Economic Characteristics Comparison). The Study Team examined two ways of measuring income; median and per capita. Median household income is measured by taking all of the annual incomes reported to the United States Census by households in an area, and calculating the income level that half of the households are above and half of the households are below. It is essentially the income earned by the household for whom half of their neighbors make more money and half of their neighbors make less money. Per capita income is measured by adding all of the incomes reported for an area together and dividing by the number of people in the area.

Median household income and per capita income are generally lower for the Study Area than for surrounding jurisdictions. However, the percent of individuals below the poverty line also is lower for the Study Area than for the surrounding jurisdictions with the exception of St. Clair County. This means that on average, Study Area residents

earn less money than the average resident of the Port Huron area but there are also fewer people in poverty than elsewhere in the Port Huron Area. People in poverty are those who live in households with incomes at or below the U.S. Department of Health and Human Services poverty guidelines of \$18,850 for a family of four.

According to the 2000 Census, the residents in the On-site Study Area, located in the City of Port Huron, had a median household income of \$36,477 and a per capita income of \$16,847. Approximately 10 percent of the On-site Study Area's residents lived at or below the poverty level.

**Table 3.2.2 Economic Characteristics Comparison**

<b>Economic Characteristics</b>	<b>On-Site Study Area</b>	<b>Off-Site Study Area</b>	<b>Total Study Area</b>	<b>Port Huron Township</b>	<b>City of Port Huron</b>	<b>St. Clair County</b>	<b>Michigan</b>
<b>Median Household Income</b>	\$36,447	\$43,028	\$38,656	\$43,978	\$39,869	\$46,313	\$44,667
<b>Per Capita Income</b>	\$16,847	\$18,197	\$17,289	\$21,583	\$17,100	\$21,582	\$22,168
<b>Individuals Below Poverty Level</b>	10.3%	6.7%	9.1%	7.4%	16.9%	7.8%	10.5%
<b>Median Gross Rent</b>	\$598	\$679	\$625	\$592	\$515	\$537	\$546
<b>Percent Owner Occupied</b>	66.8%	67.9%	67.2%	77.5%	57.2%	79.6%	73.8%
<b>Percent Vacant</b>	6.0%	2.2%	4.7%	4.8%	7.4%	7.5%	10.6%
<b>Owner-occupied housing units: Median value</b>	\$84,508	\$105,748	\$91,638	\$124,300	\$84,400	\$125,200	\$115,600
Source: U.S. Census Bureau, Census 2000							

Approximately 67 percent of the households in the On-site Study Area own the homes they live in. In 2000, approximately six percent of the homes were vacant. The average rent for the housing units which were rented was approximately \$598 per month in 2000, while the median value of a home in the On-site Study Area was \$84,508. Housing values in the Port Huron Area have increased since 2000. Current housing values are discussed in **Section 3.6.1 What is the Current Real Estate Market in St. Clair County?**

The residents in the Off-site Study Area, located in Port Huron Township, had higher incomes on average and lived in homes with higher values. Median household income was \$43,028 and per capita income was \$18,197. Almost seven percent of the area's residents lived at or below the poverty level. Approximately 68 percent of residents in the Off-site Study Area own the homes they live in. Approximately two percent of the homes were vacant in 2000. The average rent for those housing units that were rented was \$679 per month in 2000, while the median value for homes was \$105,748.

The income and housing information for each Study Area is summarized in **Table 3.2.2** and **Figures 3.2.3, 3.2.4, and 3.2.5**. For the sake of comparison, information for Port Huron Township, the City of Port Huron, St. Clair County, and the State of Michigan was also included.

### 3.2.5 How Much are the Study Area Communities Going to Grow?

**Table 3.2.3** illustrates population trends for the City of Port Huron, Port Huron Township, St. Clair County, and Southeast Michigan.

The population of the City of Port Huron is forecast to continue declining while Port Huron Township and other areas of St. Clair County are forecast to increase. Between 2000 and 2004, the estimated population growth of Port Huron Township already exceeded the 2010 Township population forecast prepared by SEMCOG in 2002. However, long-term population growth in Port Huron Township will be limited by the lack of land available for development.



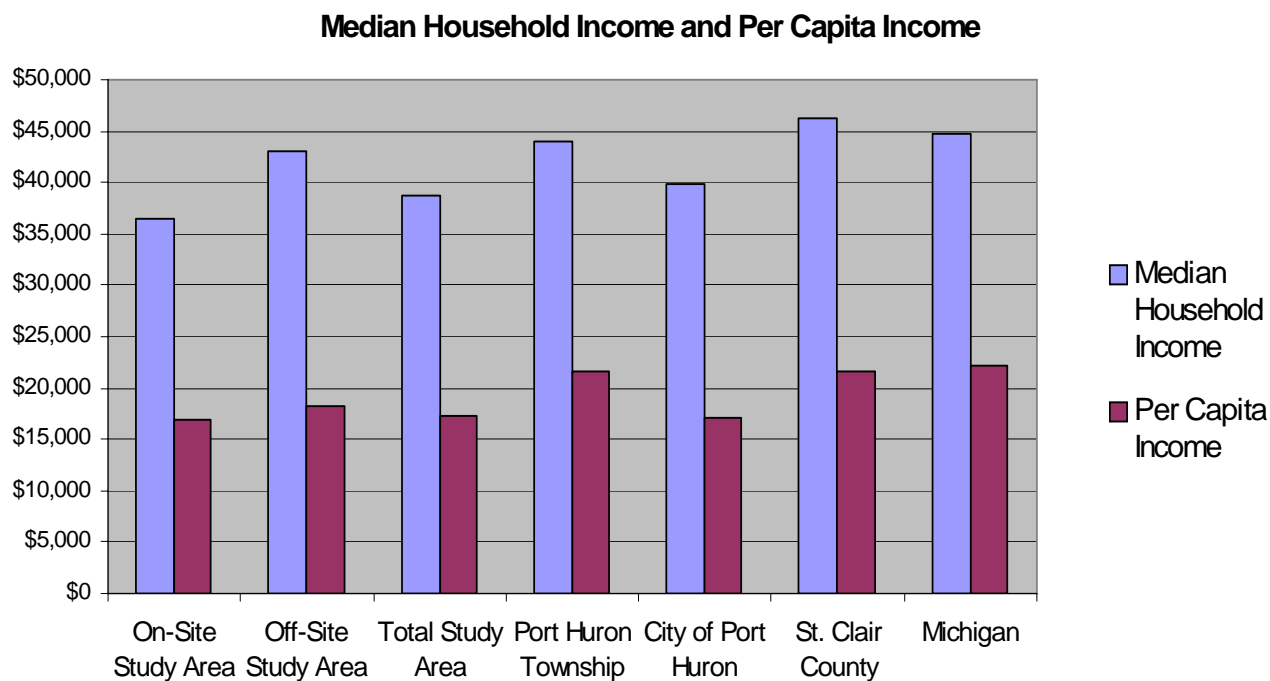
Housing in the On-site Study Area



Home in the Off-site Study Area

**Table 3.2.3 Study Area Community Population Trends**

	City of Port Huron	Port Huron Township	St. Clair County	Southeast Michigan
<b>1970</b>	35,794	7,635	120,175	4,736,008
<b>1980</b>	33,981	7,886	138,802	4,682,726
<b>1990</b>	33,681	7,621	145,607	4,590,468
<b>2000</b>	32,338	8,615	164,235	4,833,493
<b>1970 to 2000 Percent Change</b>	-9.7%	12.8%	36.7%	2.1%
<b>2004 Estimate</b>	31,791	10,789	170,622	4,899,748
<b>2010</b>	30,783	9,667	176,137	5,036,318
<b>2020</b>	29,892	10,904	191,436	5,221,042
<b>2030</b>	29,530	11,744	203,255	5,408,349
<b>2000 to 2030 Forecast Percent Change</b>	-8.7%	36.3%	23.8%	11.9%
Sources: Past population data - U.S. Census Data 2004 population estimate - SEMCOG Population and Household Estimates (July 2004). 2010-2030 population forecast - SEMCOG 2030 Regional Development Forecast (2002).				



**Figure 3.2.3 Median Household and Per Capita Income**



### Percent of Individuals Below the Poverty Level

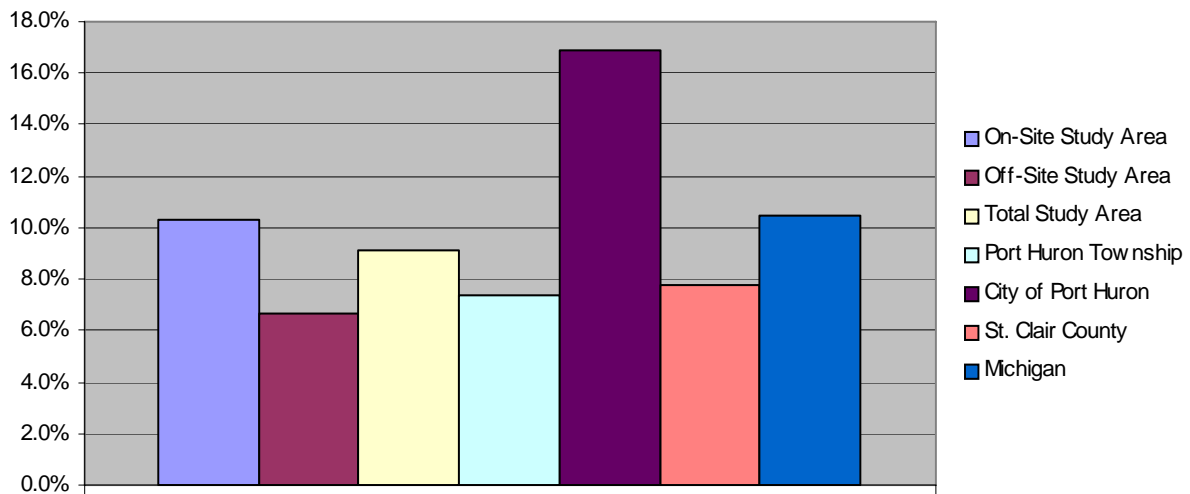


Figure 3.2.4 Percent of Individuals Below the Poverty Level

### Median House Values

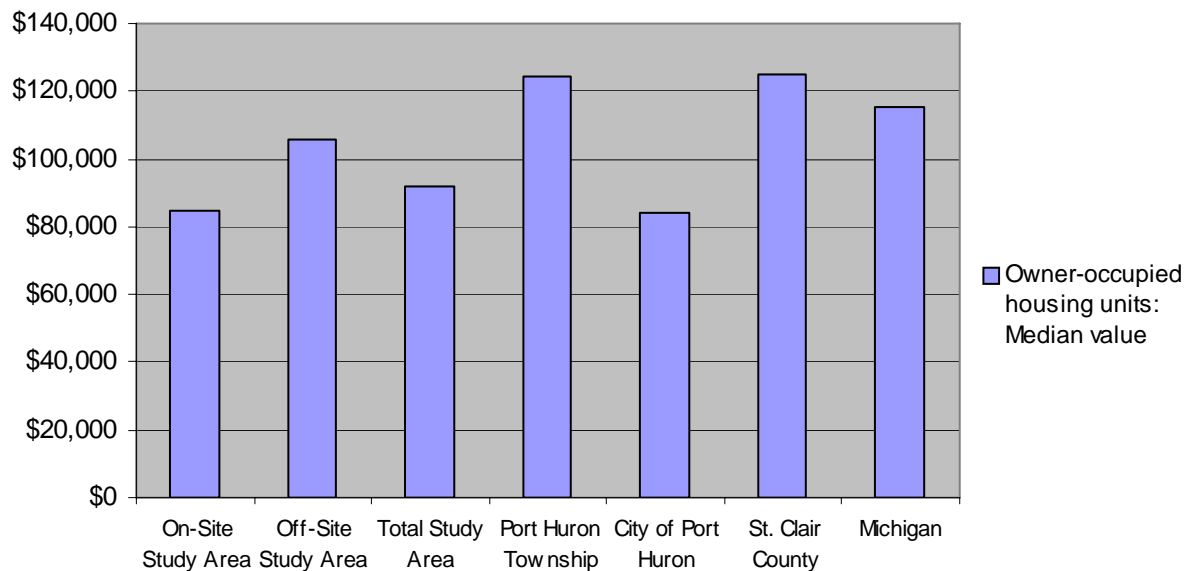


Figure 3.2.5 Median House Values

### 3.2.6 Describe the Local School System



Chippewa Middle School

The Port Huron Area School district operates the local elementary and secondary school system. The Port Huron Area School district has 20 schools and approximately 11,000 students. Two schools are located adjacent to the Study Area, Central and Chippewa Middle Schools. Both schools are located in the southwest quadrant of the Lapeer Connector and I-94/I-69. Currently, no charter schools exist in Port Huron or Port Huron Township. There are three private schools within the City of Port Huron, all outside the study area.

Vehicles operated by Port Huron Area Schools cross the existing I-94/I-69 bridge over the Black River more than 100 times each school day. This is an important bus route for the school system. Letters from the Port Huron Area School District that discuss concerns they have about the project are contained in **Appendix D.6**.

**Table 3.2.4** shows the number of students enrolled in various types of schools in the Port Huron area. This includes Port Huron Area School District Schools, private schools, and colleges in the Port Huron area such as Baker College of Port Huron and St. Clair County Community College. Baker College is located on Lapeer Road, west of the Lapeer Connector. St. Clair County Community College is located in downtown Port Huron, approximately two miles south of the existing Blue Water Bridge Plaza. Nearly 50 percent of all students are in grades one through eight.

**Table 3.2.4** also shows the education levels of Port Huron Area residents. Education levels are reasonably consistent across the Port Huron area. The City of Port Huron has a slightly higher percentage of people who have not graduated high school. Both the City of Port Huron and Port Huron Township have a slightly lower percentage of college graduates than other locations in St. Clair County. Overall, the majority of people have a high school diploma but no college experience.

**Table 3.2.4 School Enrollment and Education Levels**

	St. Clair County		Port Huron Township		City of Port Huron	
	Total	Percent	Total	Percent	Total	Percent
<b>School Enrollment</b>						
<b>Population 3 years and over enrolled in school</b>	<b>42,822</b>	<b>100%</b>	<b>2,171</b>	<b>100%</b>	<b>8,073</b>	<b>100%</b>
Nursery school, preschool	2,934	6.9%	134	6.2%	589	7.3%
Kindergarten	2,378	5.6%	111	5.1%	419	5.2%
Elementary school (grades 1-8)	20,679	48.3%	1,081	49.8%	3,937	48.8%
High school (grades 9-12)	10,253	23.9%	455	20.9%	1,836	22.7%
College or graduate school	6,578	15.3%	390	18%	1,292	16.0%
<b>Education Level</b>						
<b>Population 25 years and over</b>	<b>107,583</b>	<b>100%</b>	<b>5,735</b>	<b>100%</b>	<b>20,476</b>	<b>100%</b>
Less than 9th grade	4,546	4.2%	339	5.9%	1,109	5.4%
9th to 12th grade, no diploma	13,915	12.9%	781	13.6%	3,637	17.8%
High school graduate (includes equivalency)	40,018	37.2%	2,171	37.9%	7,321	35.8%
Some college, no degree	27,241	25.3%	1,367	23.8%	4,598	22.4%
Associate degree	8,339	7.8%	472	8.2%	1,492	7.3%
Bachelor's degree	8,562	8.0%	394	6.9%	1,438	7.0%
Graduate or professional degree	4,962	4.6%	211	3.7%	881	4.3%
Percent high school graduate or higher	82.8%	NA	80.5%	NA	76.8%	NA
Percent bachelor's degree or higher	12.6%	NA	10.5%	NA	11.3%	NA
Source: U.S. Census Bureau, Census 2000						

### 3.2.7 How Do People Get Around the Port Huron Area?

Cars, trucks and vans are by far the most common sources of personal transportation for residents of the Port Huron Area and the Study Area. **Table 3.2.5** shows that over 94 percent of Study Area workers use a motor vehicle to get to work. Less than one percent of Study Area workers use public transportation.

**Table 3.2.5 How Do Port Huron Area Residents Get to Work?**

Geographic Area	Workers 16 years and over				
	Percent Driving To Work	Percent In Carpools	Percent Using Public Transportation	Mean Travel Time to Work (minutes)	Percent Who Worked Outside County
<b>On-site Study Area</b>	94.2%	12.4%	0.8%	Not Available	11.0%
<b>Off-site Study Area</b>	94.6%	12.1%	0.6%	Not Available	16.4%
<b>St. Clair County</b>	94.4%	10.6%	0.5%	28.7	36.8%
<b>City of Port Huron</b>	89.2%	15.0%	1.7%	19.4	11.0%
<b>Port Huron Township</b>	96.5%	13.3%	0.7%	23.3	18.0%
Source: U.S. Census Bureau, Census 2000					

*Local Roads:* The heavy automobile use in the Port Huron Area means that local roads are crucial to the transportation system. The major local roads in the Study Area are shown on **Figure E.1 Appendix E**. The following are the major local roads serving the Study Area.

- Pine Grove Avenue connects the Study Area to downtown Port Huron to the south and the Fort Gratiot shopping centers to the north. Pine Grove Avenue is also Michigan State Highway 25 north of the Study Area and connects to the “Thumb” area of Michigan.
- 10<sup>th</sup> Avenue connects the Study Area to neighborhoods and businesses to the north and the south.
- Water Street provides a key local access point for Port Huron Township and City of Port Huron residents to I-94/I-69.
- I-94/I-69 over the Black River serves as a local connector for those traveling north and south on Water Street.
- The Lapeer Connector allows residents from the southern parts of Port Huron Township and the City of Port Huron

to access I-94/I-69 north and ultimately connect to Pine Grove Avenue and Fort Gratiot north of Port Huron.

There are many other local roads in the Study Area that are used by smaller numbers of Port Huron Area residents and visitors.

*Pedestrians and Cyclists:* There are no designated bicycle paths in the Study Area. Most of the local roads in the City of Port Huron portion of the Study Area include sidewalks and pedestrian signals at intersections. Most of the local roads in the Port Huron Township portions of the Study Area lack sidewalks. Pedestrian traffic is currently prohibited on the Blue Water Bridge spans due to a lack of pedestrian inspection facilities on the Canadian side of the bridge. Pedestrian access throughout the Study Area is limited by the lack of pedestrian facilities at the existing I-94/I-69 Black River Bridge crossing.

A recent planning tool for nonmotorized (i.e., pedestrian and bicycle) modes of travel in the Port Huron area is the St. Clair County Nonmotorized Guidelines published September 30, 2005, for MDOT. The document provides design guidance on developing nonmotorized facilities in St. Clair County. There are no designated nonmotorized routes in the vicinity of the Study Area.

According to the St. Clair County Regional Trails and Greenways Workshop there are numerous roadway-based corridors (bike lanes & sidewalks or sidepaths) in the preliminary concept stage of development. These are proposed on almost all major roads surrounding the Study Area (none are proposed on Lapeer Connector).

*Public Transit:* Blue Water Area Transit operates seven fixed bus routes in the Port Huron area as well as dial-a-ride services for persons with disabilities and for residents in Burtchville, Port Huron, and Fort Gratiot Townships. A shuttle between major shopping areas and a summer tourist trolley bus are also part of Blue Water Area Transit's services. Three of the fixed bus routes travel through parts of the On-site Study Area along Pine Grove Avenue, along Scott Avenue and Riverside Drive, and along Stone Street.



**Blue Water Area Transit  
Vehicle**

### 3.2.8 Describe the Local Community Facilities



Riverside Boat Ramp

This section discusses the existing parks, community centers, churches and other community facilities that are key parts of community and neighborhood cohesion. **Figure E.21** in the separate **Appendix E**, illustrates the existing community facilities located in and near the Study Area.

*Parks and Recreation:* The City of Port Huron has 31 parks and recreation facilities scattered throughout the city, including six marinas and boat ramps. Port Huron Township has eight parks including a campground and a reservoir.

There are no City of Port Huron parks located within the Study Area. The City of Port Huron's Riverside Park Boat Ramp is located at the northern edge of the Study Area, on the eastern shore of the Black River.



Port Huron Township Park No. 1

Two of the Township parks and Bakers Field (an old airplane facility) have frontage on the Black River and provide the majority of public access to the Black River. Port Huron Township Park No. 1 is located in the Study Area, between Water Street and the Black River north of I-94/I-69. This 11-acre park includes a public service building that may be rented for events, picnic equipment for small groups, a covered pavilion for large groups, benches to observe the Black River and Stocks Creek confluence and the wildlife in the pond, and playground equipment. Park No. 1 provides roughly 100 feet of frontage on the Black River and about 1,500 feet on Stock Creek which provides fishing access to visitors. Park No. 1 also houses the areas most popular sledding hill.

The Charter Township of Port Huron Five Year Parks and Recreation Plan (January 1, 2006 thru December 31, 2010) lists future plans for Park No. 1 as parking lot improvements, add a gazebo and build a toboggan run and band shell.

Port Huron Township Park No. 2 and Campground is located on the west side of Water Street across from Port Huron Township Park No. 1. This 36-acre park is used by seasonal RV campers from both Canada and the United States.



Canadian visitors stay for mostly weekend visits that allow them to take home duty free goods. A majority of the U.S. visitors are former homeowners in the Port Huron area that live in their RV year-round and winter in the south and summer in the Port Huron area. Park No. 2 has 174 campsites, a bathhouse, and a sanitary sewer dump station. It is primarily a campground but it also houses storage buildings for grounds equipment, a community service room/pavilion, former tennis courts used for rollerblading and basketball, two winter ice skating ponds, and playground equipment.



Port Huron Township Park  
No. 2

Not only is the Port Huron Township Park No. 2 and RV Campground an asset to the community as a quality recreation destination, but it is important to all of the Township parks because it is the primary source of funding for all maintenance and upgrades in the township's park system. The Park Fund income from the Tourist Accommodations rental from the campground was \$94,011 in 2004, \$141,484 in 2005, and budgeted for \$161,000 in 2006.

The Charter Township of Port Huron Five Year Parks and Recreation Plan (January 1, 2006 thru December 31, 2010) lists future plans for Park No. 2 as building ice skating rinks, create a multi-use paved area with fencing, repair one of the old tennis courts and create a nature walk with a footbridge and signage. Port Huron Township's 40<sup>th</sup> Street Pond Park is located just south of the Study Area adjacent to the northeast quadrant of the I-94/I-69/Business Loop 69 interchange.

The privately owned Bridge Harbor Marina is located within the Study Area on the western shore of the Black River, south of I-94/I-69. The Port Huron Lanes bowling alley is located at the southeast corner of the M-25 Connector and Hancock Street.

Community Centers: The City of Port Huron operates one community center while Port Huron Township does not have community centers. There are no community centers located in or near the Study Area.

Churches: Four churches are located in the Study Area: Light House Baptist Church, First Free Methodist Church, Pilgrim Baptist Church, and Ross Bible Church. Lighthouse Baptist

has a congregation of 100 and Ross Bible Church has a congregation of 300. Ross Bible Church conducts an annual community food drive and hosts an annual community block party. Only the First Free Methodist Church will be affected by the project it has a congregation of approximately 70.



Ambulance on Pine Grove Avenue

Emergency Services: There are no police stations, fire stations, hospitals, ambulance dispatch centers, or other emergency service providers located in or immediately adjacent to the Study Area. Major north-south routes including Pine Grove Avenue, 10<sup>th</sup> Street, and I-94/I-69 are important emergency access routes between the northern and southern parts of the Port Huron Area.

The City of Port Huron Police Department and the St. Clair County Sheriff's office are located in downtown Port Huron, approximately two miles south of the existing plaza.

The City of Port Huron Fire Department has three fire stations serving residents and businesses within the city limits. The closest fire station to the On-site Study Area is on Sanborn Street, approximately one mile north of the existing plaza. Port Huron Township operates a fire station on Lapeer Road, approximately one mile southwest of the proposed plaza site for the Township Alternative.

The Port Huron Hospital is located approximately one mile south of the existing plaza and is accessed by using Pine Grove Avenue. Mercy Hospital is located approximately three miles south of the existing plaza and is accessed by following Pine Grove Avenue to 10<sup>th</sup> Street and taking 10<sup>th</sup> Street to the hospital.



Businesses Near the Existing Plaza

Community Businesses: Various service and retail establishments are located in the Study Area. These consist of gas stations, fast food restaurants, convenience stores, small retail establishments, and automotive dealerships. There are also recreation based businesses such as a bowling alley and a marina. Businesses in the Study Area employ people who live directly in the neighborhood as well as those who live in the neighboring communities of Port Huron, Fort Gratiot, and Kimball Townships. Employees commute from within the existing neighborhood and the surrounding communities.

### 3.2.9 How Will the Alternatives Affect Neighborhoods?

The following paragraphs will discuss the anticipated effects of the alternatives on existing neighborhoods and community facilities. Many of the potential effects of the alternatives on neighborhoods such as relocations, noise, air quality and visual appearance are discussed in detail in other sections of this DEIS. These affects will be mentioned briefly here and readers will be directed to the other sections of this document.

Strong neighborhoods are those with an identity, where neighbors have easy access to each other, and are familiar with one another. Transportation projects can impact neighborhoods by relocating residents, dividing the neighborhood, removing local businesses, and creating an atmosphere that discourages neighbors from interacting with each other. For example, the construction of a new, busy road can separate one part of a neighborhood from another. The removal of some homes in a neighborhood can separate friends and leave a smaller sized neighborhood. The relocation of local businesses could change where people shop or where they eat out.

All Build Alternatives will affect existing neighborhoods. MDOT and FHWA will work with the local communities and neighborhoods to reduce and minimize neighborhood impacts as much as possible.

*No-Build Alternative:* The No-Build Alternative will affect the neighborhoods surrounding the existing plaza as increased congestion will make it more difficult to live near the plaza. Without improvements, local residents can expect increased back-ups and congestion leading to increased noise and air quality issues. These effects are discussed in more detail in **Section 3.9 Air Quality** and **Section 3.10 Noise**.

With the No-Build Alternative, Pine Grove Avenue and Hancock Street will not be improved. Increased congestion on these local roads will make it more difficult for local residents to access local businesses. Heavily congested roads will also continue to serve as barriers between the neighborhoods surrounding the plaza.



Home in the Neighborhood  
South of the Existing Plaza



Port Huron Neighborhood  
Street

The No-Build Alternative does not relocate any homes in existing neighborhoods or any businesses that would serve these neighborhoods.

City East Alternative: The City East Alternative would displace in total, 155 households and 34 businesses. All but three of the homes and two of the businesses are located around the existing plaza. This alternative would require the relocation of a substantial number of homes in two neighborhoods. The City East Alternative (see exhibits in **Appendix E**) would require all of the homes on Mansfield Street and most of the homes on Scott Avenue west of Pine Grove Avenue. Meaning a third of the homes in this neighborhood south of the plaza would be taken for this alternative. Homes on Lyon Street would now be the first set of residences on the south side of the plaza. They currently have two blocks of homes between them and the plaza. The effects on this neighborhood would be substantial. Approximately one third of the homes would be eliminated and there would likely be pressure to develop new businesses in the parts of this neighborhood that are closest to the plaza.



Homes in the Neighborhood  
Northeast of the Existing Plaza

The City East Alternative would also require the relocation of 13 homes along Church Street, Elmwood Street, and 10<sup>th</sup> Street in the neighborhood northeast of the existing plaza. These homes are on the edge of a large neighborhood which already lost more than 30 homes due to previous plaza and bridge projects in the 1980s and 1990s. Some of the homes along Elmwood Street are already vacant or have been changed to office use. This shows that homes on the edge of the current plaza are less desirable for residential uses. Similar changes could occur along 10<sup>th</sup> Avenue if this alternative is built. The City East Alternative combines Pine Grove Avenue and 10<sup>th</sup> Avenue into one five lane road east of the existing plaza. This will be a busy, principal north-south street for the entire Port Huron area. There would be five homes that would remain along the Port Huron/10<sup>th</sup> Avenue combined road with likely pressure to convert these properties to commercial use in the future.

The City East Alternative would also displace all 24-units in the Riverside Drive Condominiums complex. This would also be a neighborhood type impact as existing neighbors and

friends in the complex are unlikely to relocate to the same place.

The City East Alternative would require 34 businesses to be displaced. These businesses include gas stations, restaurants, and offices that serve the local community as well as border crossing traffic. If the new plaza remains in Port Huron, many of these businesses may want to find new sites near the plaza. This may create new pressures to convert homes in the nearby neighborhoods to business sites. There will likely be a period of time, after the businesses are displaced when local residents will have to travel further to get to local businesses. Residents in the neighborhoods surrounding the plaza that walked to the nearby restaurants or filled-up at the nearby gas stations will have to travel a few extra blocks to get the same services. Impacts to businesses are discussed further in **Section 3.4 Economics**.

The new plaza for the City East Alternative would further divide the community from north to south and from east to west. The neighborhoods to the west of the plaza would be more isolated from neighborhoods to the south and east of the plaza. The new 2,060 foot wide plaza site would divide the community into separate areas north and south of the plaza. The new plaza would expand the plaza site by 1,520 feet. The wider plaza would increase the perception of the plaza and bridge as a barrier that splits the community in half. The number of north-south routes around the plaza would be reduced from three to two.

The City East Alternative would also have noise, air quality, and visual effects on residents remaining in the neighborhoods surrounding the new plaza, as well as potential noise, air quality, and visual effects on the Chippewa and Central Middle Schools and Ross Bible Church. These effects are discussed in more detail in **Section 3.9 Air Quality**, **Section 3.10 Noise**, and **Section 3.8 Aesthetic and Visual Impacts**.

City West (Preferred) Alternative: The Preferred Alternative would displace 137 households (18 residences less than the City East Alternative) and 37 businesses. Similar to the City East Alternative the Preferred Alternative would require the

relocation of a substantial number of homes in two neighborhoods. This alternative would require all of the homes on Mansfield Street and the majority of the homes on the northern side of Scott Avenue west of Pine Grove Avenue. These homes are located in the first block of a six block neighborhood located south of the plaza. Homes on the southern side of Scott Avenue would now be the first set of homes in this neighborhood. The effects on this neighborhood would be less than the City East Alternative but still substantial as a number of homes would likely be eliminated and there would likely be pressure to develop new businesses in areas of the neighborhood that are closest to the plaza.

Similarly to the City East Alternative, the Preferred Alternative would also require the relocation of 13 homes along Church Street, Elmwood Street, and 10<sup>th</sup> Street in the neighborhood northeast of the existing plaza. These homes are on the edge of a large neighborhood which already lost more than 30 homes due to previous plaza and bridge projects in the 1980s and 1990s. Some of the homes along Elmwood Street are already vacant or have been changed to office use. This shows that homes on the edge of the current plaza are less desirable for residential uses. The Preferred Alternative turns Pine Grove Avenue into a boulevard allowing it to remain a principle north-south street for the entire Port Huron Area along with 10<sup>th</sup> Avenue.

The City West Alternative would require 37 businesses to be displaced. Like the City East Alternative these businesses include gas stations, restaurants, and offices that serve the local community as well as border crossing traffic. With the plaza expansion in Port Huron, many of these businesses may want to find new sites near the plaza. This may create new pressures to convert homes in the nearby neighborhoods to business sites. There will likely be a period of time, after the businesses are displaced when local residents will have to travel further to get to local businesses. Residents in the neighborhoods surrounding the plaza that walked to the nearby restaurants or filled-up at the nearby gas stations will have to travel a few extra blocks to get the same services. Impacts to businesses are discussed further in **Section 3.4 Economics**.



The new plaza for the Preferred Alternative would further divide the community from north to south and from east to west. The neighborhoods to the west of the plaza would be more isolated from neighborhoods to the south and east of the plaza. Although the footprint for the Preferred Alternative is smaller than the City East Alternative the new 2,050 foot wide plaza site would divide the community into separate areas north and south of the plaza like the City East Alternative. The new plaza would expand the plaza site to the north and south by a total of 1,515 feet. The wider plaza would increase the perception of the plaza and bridge as a barrier that splits the community in half.

The City West Alternative would also have noise, air quality, and visual effects on residents remaining in the neighborhoods surrounding the new plaza, as well as potential noise, air quality, and visual effects on the Chippewa and Central Middle Schools and Ross Bible Church. These effects are discussed in more detail in **Section 3.9 Air Quality**, **Section 3.10 Noise**, and **Section 3.8 Aesthetic and Visual Impacts**.

*Township Alternative:* The Township Alternative would require 56 homes and 29 businesses to be displaced. Nine of the homes are located along Maywood Drive in Port Huron Township. The elimination of these homes would remove this entire small neighborhood at the end of Maywood Drive. The Township Alternative will displace 56 single family households in the City of Port Huron due to local road improvements. These households are located at the edge of the existing neighborhoods and, therefore, would not affect the cohesiveness of the neighborhoods.



Home on Maywood Drive

The Township Alternative would also require the displacement of all 24-units in the Riverside Drive Condominiums complex. This would also be a neighborhood type impact as existing neighbors and friends in the complex are unlikely to relocate to the same place.



All Build Alternatives would affect the Riverside Drive Condominiums

displacement of 29 businesses that serve both the local community and existing plaza traffic. The type of businesses that develop in this area in the future may change due to the relocation of the plaza and the local road improvements. There will likely be a period of time, after the 29 businesses are displaced and while the local road improvements are being constructed, when local residents will have to travel further to get to local businesses. Residents in the neighborhoods surrounding the plaza that walked to the nearby restaurants or filled-up at the nearby gas stations will have to travel a few extra blocks to get the same services. Impacts to businesses are discussed further in **Section 3.4 Economics**.



Existing I-94/I-69 Corridor  
West of the Water Street  
Interchange

The Township Alternative would not further divide the community in the vicinity of the existing plaza. The existing plaza footprint would remain. The Township Alternative would require security walls, buffers, and fencing along the corridor between the existing plaza and the proposed new plaza. The security requirements are discussed in detail in **Section 3.5 Public Safety and Security**. The secure corridor would act like a barrier between the Port Huron Township neighborhoods on either side. Water Street would cross over the secure corridor as it crosses over I-94/I-69 today. However, the widening of the existing I-94/I-69 corridor and the additional security features would increase the perception of the corridor as a barrier that divides the community. The Township Alternative does not have the significant neighborhood impacts that the City East and Preferred Alternatives do. However, the visual barrier of the secure corridor would be a significant impact to the overall cohesiveness of the community.

The Township Alternative would also have noise, air quality, and visual affects on residents remaining in the neighborhoods surrounding the new plaza in Port Huron Township. There are neighborhoods on the north side of the proposed new plaza along Eastland Road, Westland Road and north of West Water Street that would be affected. There is also a neighborhood south of the proposed plaza site, next to the Central and Chippewa Middle Schools that would be affected. These effects are discussed in more detail in **Section 3.9 Air Quality**, **Section 3.10 Noise**, and **Section 3.8 Aesthetic and Visual Impacts**.

### 3.2.10 How Will the Alternatives Affect Community Services and Facilities?

The alternatives would have little effect on community services. There are no community agencies located in the Study Area and no community service providers would be relocated. The alternatives would affect schools, churches, parks, and private community facilities. These effects are discussed for each alternative below.

*No-Build Alternative:* The No-Build Alternative would not affect any schools, churches, parks, and public or private community facilities. Long-term congestion from backups on the plaza onto I-94/I-69 would affect the speed of school bus traffic across the Black River Bridge.

*City East Alternative:* The City East Alternative would displace the First Free Methodist Church at the corner of Elmwood Street and 10<sup>th</sup> Street. Construction of the City East Alternative would lead to short-term traffic congestion and detours that would affect school bus traffic and emergency services. All detours would be discussed with local officials before they are put in place. The City East Alternative would improve the flow of local traffic, including school buses, across the Black River Bridge as it adds new lanes to the bridge and separates local traffic from border crossing traffic.

This alternative requires property from the Port Huron Area School District located at the southwest corner of the interchange between the Lapeer Connector and I-94/I-69. The City East Alternative would require approximately 11 acres of forested and open land owned by the School District. This property is part of the Chippewa and Central Middle Schools property. No school buildings or facilities would be acquired. The property is not used for school programs or recreational purposes. The Study Team has discussed this property with the Port Huron Area School District through letters and meetings and believes that arrangements can be made to purchase the property.



Chippewa Middle School

*City West (Preferred) Alternative:* The Preferred Alternative would have similar affects to community services and facilities as the City East Alternative. The Preferred Alternative would

displace the First Free Methodist Church at the corner of Elmwood Street and 10<sup>th</sup> Street. This alternative would also require the same property from the Port Huron Area School District located at the southwest corner of the interchange between the Lapeer Connector and I-94/I-69. No school buildings or facilities would be acquired.

Construction of the City West Alternative would lead to short-term traffic congestion and detours that would affect school bus traffic and emergency services. All detours would be discussed with local officials before they are put in place. The Preferred Alternative will ultimately improve the flow of local traffic.

The Preferred Alternative like the City East Alternative would impact one private recreational business. The Port Huron Lanes Bowling Alley, located at the corner of Hancock Street and the M-25 Connector would be relocated.

*Township Alternative:* The Township Alternative requires property from the Port Huron Area School District located at the southwest corner of the interchange between the Lapeer Connector and I-94/I-69. The Township Alternative would require approximately 11 acres of forested and open land owned by the school district. This property is part of the Chippewa and Central Middle Schools property. No school buildings or facilities would be acquired. The property is not used for school programs or recreational purposes. The Study Team has discussed this property with the Port Huron Area School District through letters and meetings and believes that arrangements can be made to purchase the property. Construction of the Township Alternative would lead to short-term traffic congestion and detours that would affect school bus traffic. All detours would be discussed with local officials before they are put in place. The Township Alternative would improve the flow of local traffic including school buses across the Black River Bridge as it add lanes to the bridge and separates local traffic from border crossing traffic.



Ross Bible Church

The Township Alternative would require property from Ross Bible Church for the new plaza. The church building and facilities would not need to be purchased. Ross Bible Church

planned to use the land to build assisted living housing. If this alternative is constructed the church would no longer be able to build the assisted living facility at this location.

This alternative would also have potential noise, air quality, and visual effects on the Chippewa and Central Middle Schools and Ross Bible Church. These effects are discussed in detail in **Section 3.9 Air Quality**, **Section 3.10 Noise**, and **Section 3.8 Aesthetic and Visual Impacts**.

The Township Alternative would impact one private recreational business. Parking for the Port Huron Lanes Bowling Alley would need to be purchased as part of local road improvements.

### **3.2.11 How Will the Alternatives Affect Public Parkland and Potential Section 4(f) or 6(f) Properties**

There are four properties located within or adjacent to the Study Area that could be potentially impacted by the project:

- Port Huron Township Park No. 1
- Port Huron Township Park No. 2
- Riverside Park
- E.C. Williams House

The three parks qualify for protection under Section 4(f) because they are publicly owned. The E.C. Williams House qualifies due to its historic significance. There are no properties affected by any of the Build Alternatives that are regulated by Section 6(f).

Minor property acquisition is required from Port Huron Township Park No. 1 for the construction of the freeway and interchange at Water Street as part of all three Build Alternatives. Access to the park may be altered during construction but the playground equipment, pavilion and service building, and fishing access will not be affected by the construction.

Port Huron Township Park No. 2 and RV Campground and Riverside Park do not have any potential impacts due to the

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#### **What is Section 4(f)?**

Section 4(f) of the Department of Transportation Act of 1966 states that no transportation project should be approved which requires the “use” of any publicly owned land from a public park, recreation area, wildlife and waterfowl refuge, or historic site unless there is no feasible or prudent alternative to the use of such land.

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#### **What is Section 6(f)?**

Section 6(f) of the Land and Water Conservation Act prohibits the conversion of any property acquired or developed with the assistance of the land and water conservation funds to anything other than public outdoor recreation use without the approval of the Secretary of the Department of Interior.

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Build Alternatives. Details on all three parks are discussed under **3.2.8 Describe the Local Community Facilities.**

The E.C. Williams House would be acquired and relocated as part for the construction of the Preferred (City West) Alternative to accommodate a larger plaza area. There would be no direct impacts to the E.C. Williams House under the City East or Township Alternative. Further discussion of the impacts on historic sites is located in **Section 3.15 Cultural Resources** and in **Section 4.0 Section 4(f) and 6(f) Evaluation.**



City of Port Huron Fire Station  
Number 3



Port Huron Township Fire  
Station

### **3.2.12 How Will the Alternatives Affect Emergency Services?**

None of the alternatives will require the relocation of any hospitals, fire, police, or other emergency service facilities. The effects of all of the alternatives will be changes in emergency access routes and response times. The No-Build Alternative will not change any of the existing emergency access to the plaza or across the Port Huron area. The No-Build Alternative will potentially affect response times due to congestion caused by border crossers backed up on the Black River Bridge. Local road congestion would also affect response times for the No-Build Alternative.

The City East Alternative eliminates one north-south road through the area surrounding the existing plaza. This could have a major affect on emergency service routes and response times. The Township Alternative would have few effects on emergency service responses in the Port Huron Area but substantially changes the emergency service access to the plaza and the I-94/I-69 corridor itself. The City West Alternative provides north-south road access through the area with the new Pine Grove Boulevard and 10<sup>th</sup> Avenue. Both city plaza alternatives would improve local emergency access along I-94/I-69 by reducing border related backups and separating local traffic from border crossing traffic. A full discussion of the affects of the alternatives on emergency services is found in **Section 3.5 Public Safety and Security.**



### 3.2.13 How Will the Alternatives Affect Pedestrians and Cyclists?

The alternatives would not have an effect on bicycle or pedestrian use of roads and paths within the Study Area. There are no designated bicycle routes or documented extensive use of the existing road network by bicyclists. Also, any changes to the existing road network, sidewalks, and signals would have little effect on pedestrians. Sidewalk ramps will be upgraded to current ADA standards on roadways that are altered as part of this project.

The alternatives do not improve access for pedestrians or cyclists. Sidewalks will be maintained on roadways which currently feature sidewalks. New sidewalks will be provided on affected roadways that do not currently have sidewalks if there is a demonstrated need for pedestrian accommodation and/or a need to maintain or improve pedestrian connectivity between the neighborhoods affected by the proposed project. Changes to the current policy of prohibiting cyclist and pedestrian access to the border crossing, except under special circumstances, are not part of this project. The Township Alternative would make providing pedestrian access to the border crossing more difficult than either of the city alternatives due to the 1.5 mile secured corridor between the proposed plaza and the Blue Water Bridge.

A pedestrian crossing across the Black River Bridge was evaluated by the Study Team however local adjacent connections have not been identified. MDOT will continue to work with local stakeholders to assess level of importance and decide if it should be added during the FEIS and design phase.

### 3.2.14 How Will the Alternatives Affect Transit and Carpooling?

The Build Alternatives will create minor alterations to the existing public transit services within the Study Area. The current routes for buses, dial-a-ride vans, shuttles, and trolley services may change due to the closure and relocation of certain local roads, but changes are expected to be minor and would likely have little effect on the efficiency of existing services. Local road improvements on Pine Grove Avenue



**The Alternatives do not improve pedestrian and bicycle use of roads.**

may enhance transit times through the Study Area. There will be short-term construction related delays and detours for transit routes as local roads are improved and a new plaza is constructed. The Build Alternatives are not expected to change carpooling rates.

#### **3.2.15 How Will MDOT and FHWA Reduce and Compensate for the Neighborhood and Community Impacts?**

The above paragraphs discuss several potential impacts to neighborhoods and community facilities. There are various ways that MDOT and FHWA will attempt to avoid, reduce or compensate for these potential impacts. This is called mitigation of impacts. MDOT and FHWA will continue to work with the community on measures to mitigate or compensate for the negative effects of the project throughout the environmental clearance process and the design and construction of a new plaza. **Chapter 5 Mitigation** discusses the potential ways that MDOT will mitigate the negative effects of the project.



## 3.3 Environmental Justice

This section analyzes the potential adverse and excessive environmental and human health impacts the proposed project may have on low-income and minority communities. The area of analysis includes the City of Port Huron, Port Huron Township, Kimball Township, and Fort Gratiot Township. **Figures 3.3.2, 3.3.3, and 3.3.4**, at the end of this section, show the analysis area and where in the analysis area the low-income and minority communities are located.

### 3.3.1 What is Environmental Justice?

In early transportation projects, many of the impacts affected minority and low-income populations in greater ways than other groups. This has been partly attributed to low-income populations and neighborhoods being located near downtowns and other common destinations which were the target of transportation projects. These neighborhoods were typically low value properties with a perceived lack of political power and representation. As a result low income and minority populations and neighborhoods were impacted more often than other populations and neighborhoods.

Environmental Justice is an attempt to address disproportionately high and adverse human health or environmental impacts that projects funded by the federal government may have on minority and low income populations. The current Environmental Justice analysis requirements were created through Executive Order 12898 by the President of the United States in 1994. The President directed all federal agencies to make Environmental Justice part of their missions and to identify and address the effects of their programs, policies and activities on minority and low-income populations. Environmental Justice built on Title VI of the 1964 Civil Rights Act which prohibits discrimination on the basis of race, color, sex, and national origin in programs and activities receiving federal financial assistance. Environmental Justice is a policy that has three major parts:

- Avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including

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#### Title VI of the 1964 Civil Rights Act:

Prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance.

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social and economic effects of the project, on minority populations and low-income populations

- Ensure the full and fair participation by all potentially affected communities in the transportation decision making process
- Ensure minority and low income populations receive their equal share of the benefits from the project

### 3.3.2 What Groups are Included in Environmental Justice Analysis?

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#### Low-Income Populations Defined:

Those households with incomes at or below the Department of Health and Human Services poverty guidelines of \$18,850 for a family of four.

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For the analysis of Environmental Justice in projects like the Blue Water Bridge Plaza Study, minority persons are defined as any person who is Black, Hispanic, Asian American, American Indian, or Alaskan Native. Low-income populations are those households with incomes at or below the Department of Health and Human Services poverty guidelines of \$18,850 for a family of four. Whether or not they fit the definition of an Environmental Justice population, all groups and individuals have the right to access and participate in the transportation decision-making process as protected by Title VI of the Civil Rights Act.

The Environmental Justice analysis was performed using a set of guidelines provided by the Federal Highway Administration (FHWA) and in consultation with MDOT officials responsible for Environmental Justice issues. The Study Team tailored the general principles and procedures of the guidelines to the unique character of the community and the alternatives being studied.

As discussed in **Section 3.2 Community and Neighborhood Impacts**, the Study Team performed an analysis of the Blue Water Bridge Plaza Study Area using United States Census data. The Study Area for Environmental Justice was selected by including all of the Census block groups partially contained in the Study Area. Within the On-site Study Area in the City of Port Huron 29 census block groups made up of 1311 residents were used to determine the Environmental Justice population. The Off-site Study Area in Port Huron Township consists of 640 residents within five census block groups. This data was incorporated into a geographical information system (GIS) to identify any minority or low-income populations. The

GIS software allowed the Study Team to create maps showing where low-income and minority populations are found in the Port Huron area. **Figures 3.3.2, 3.3.3, and 3.3.4** are examples of the types of maps that were created with the GIS software. One low income family housing complex is located in the Study Area, Gratiot Village and is located on Riverview Street between 10<sup>th</sup> and 12<sup>th</sup> Avenues. The project will not affect this family housing complex. However, there are several low-income families within the project area that receive a housing subsidy who may be displaced as a result of this project. Representatives from both the Port Huron Housing Commission and the Michigan State Housing Development Authority have indicated to MDOT that there is sufficient replacement housing in the Port Huron area to accommodate any of the displaced families that receive a housing subsidy.

The Study Team also asked local agencies and churches to identify any neighborhoods with higher numbers of minority or lower income people. The resulting analysis identified that there were parts of the Study Area that contained a larger percentage of minority or low-income populations than others and that there is a greater percentage of minority and low-income populations residing in the neighborhoods surrounding the existing plaza as opposed to the Off-site Study Area. Within the Study Area the two largest minority groups are African American and Hispanic or Latinos. Other groups in the Study Area includes White (Non-Hispanics), Indian, and Asian populations. The study team did not identify any concentrations of other populations or ethnic groups that would be protected under Title VI but do not fit the specific criteria of Environmental Justice populations.

Both Federal and State Environmental Justice policies stress that early and ongoing public outreach is a vital component of the Environmental Justice process. The Study Team solicited information from potentially low-income and/or minority individuals who live and work in the proposed plaza expansion areas and provided many opportunities to have full and fair participation in the decision making process. Public meetings and workshops were held in local area facilities on major bus routes allowing access to low income populations. Additionally, MDOT provided bi-weekly one on one meetings

to community members expressing interest in discussing the project. These activities were used to establish trust and an open dialogue with community members. The strategy used for effective public participation included a series of well advertised public meetings:

- In March 2003, the Public Involvement Kickoff Meeting was held to introduce the study.
- In September 2003, a public meeting was held to present Illustrative Alternatives.
- In May 2004, a public meeting was held to present Updated Alternatives.
- In February 2005, a meeting was held to present further refined alternatives and receive comments from the public.
- In June 2006, the first Values and Visioning Workshop was held to allow the public to discuss and identify characteristics within the community they felt were important and to determine the look and feel of the area surrounding the plaza.
- In July 2006, a Values and Visioning Workshop was held to assist the study team in developing an integrated vision for the future that demonstrates how the project area should look and feel
- In September 2006, a public meeting was held to introduce the new City West Alternative to the public.
- In December 2006, a public information meeting was held to present alternatives for I-94/I-69 Corridor Improvements.
- In March 2007, a community visioning workshop for I-94/I-69 Corridor improvements was held.



**March 2007, a Community Visioning Workshop for I-94/I-69 Corridor improvements was held**

The Study Team encouraged the public to comment on the study and alternatives at all meetings. Newsletters, including meeting notices and study updates, were sent to homes and businesses within the study corridor including all minority and lower income households. Several hundred copies of the newsletters also were provided at local gathering places, including churches, to be distributed to concerned citizens who may not have received the newsletter through other sources. Late afternoon and evening sessions were held to make it as convenient as possible for the public to attend meetings, and the locations of all public meeting sites were chosen with accessibility and convenience for all citizens in

mind. All locations were public transit accessible, enhancing the opportunity for lower income citizens or those who do not own automobiles to attend.

Low-income, minority, and other community members will have further chances to comment on the project through a well advertised public hearing process and public comment period during the review process of this Draft Environmental Impact Statement.

### 3.3.3 Minority Groups in the Study Area

Based on information obtained from the 2000 United States Census, the Study Team compared the populations affected by the alternatives. The Study Area for Environmental Justice was selected by including wholly or partially all of Census block groups contained in the Study Area. Of the 1,311 residents found in the On-site Study Area, located within the City of Port Huron, 90.6 percent of the residents are identified as white (non-Hispanic). African-Americans and Hispanic or Latinos are the two largest minority groups at 3.1 percent and 3.0 percent of the total population, respectively.

The Off-site Study Area, located in Port Huron Township, has a population of 640 residents. Approximately 95.8 percent of the residents are identified as white (non-Hispanic). The largest minority group in the Off-site Study Area is Hispanic or Latinos who make up 2.0 percent of the population.

Ethnic characteristics and the percent of minority populations are shown in **Table 3.3.1** and **Figure 3.3.1**. The table and figure also present data for Port Huron Township, the City of Port Huron, St. Clair County, and the State of Michigan as well. Minority populations located in Port Huron Township and the City of Port Huron but not directly within the Study Area were also considered as part of the analysis of Environmental Justice Impacts as they could be indirectly affected by proposed improvements.



All public meeting locations were public transit accessible

### Total Minority Population as a Percentage of All Persons

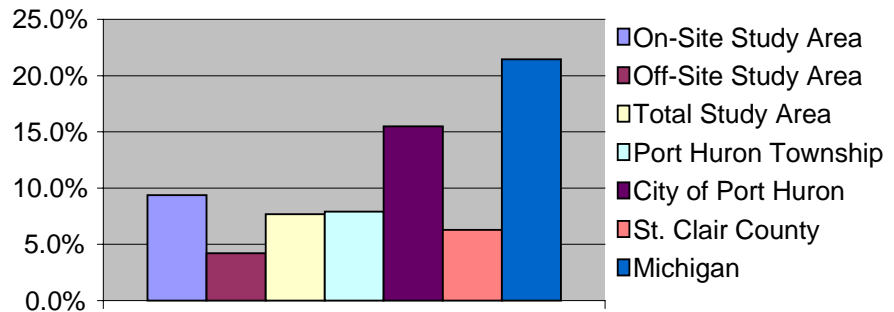


Figure 3.3.1 Minority Populations

Table 3.3.1 Ethnicity

Ethnicity Characteristics	On-Site Study Area	Off-Site Study Area	Total Study Area	City of Port Huron	Port Huron Township	St. Clair County	Michigan
<b>Total Persons</b>	1,311	640	1,951	32,338	8,615	164,235	9,938,444
<b>Total Minority Population as a Percent of All Persons</b>	9.4%	4.2%	7.7%	15.5%	7.9%	6.3%	21.4%
<b>White Population (Non-Hispanic) as a Percent of All Persons</b>	90.6%	95.8%	92.3%	84.5%	92.1%	93.7%	78.6%
<b>African American Population as a Percent of All Persons</b>	3.1%	0.6%	2.3%	7.7%	3.5%	2.1%	14.2%
<b>American Indian Population as a Percent of All Persons</b>	1.0%	0.5%	0.8%	0.9%	0.6%	0.5%	0.6%
<b>Asian Population as a Percent of All Persons</b>	0.4%	1.1%	0.6%	0.6%	0.3%	0.4%	1.8%
<b>Hispanic (all races) Population as a Percent of All Persons</b>	3.0%	2.0%	2.7%	4.3%	2.5%	2.2%	3.3%
<b>Other Race Alone as a Percent of All Persons</b>	1.4%	0.0%	0.9%	1.3%	0.6%	0.6%	1.3%
<b>Two or More Races as a Percent of All Persons</b>	1.9%	0.0%	1.3%	2.8%	1.3%	1.4%	1.9%
Source: 2000 U.S. Census Data. Study Area data is for the Census Blocks (Population Characteristics) and Census Block Groups (Economic Characteristics) located in the Study Area.							

### **3.3.4 What are the Effects of Each Alternative on Environmental Justice Populations?**

Potential Environmental Justice effects are defined as the unavoidable negative effects of the project that would be mostly experienced by minority and low income populations or are higher than the negative effects that would be suffered by non-minority and/or non-low-income populations. The analysis has determined that there are no disproportionately high and adverse human health or environmental impacts on minorities and/or low-income populations by any of the Practical Alternatives.

Impacts from any Practical Alternative would be similar for all groups regardless of the demographic or socioeconomic characteristics of the community. All negative impacts to environmental resources, such as air quality, noise, and public services will be avoided, minimized, or rectified to the extent possible. MDOT will provide purchasing and relocation assistance and advisory services for any member of the community whose property was needed for the project. MDOT will inform individuals, businesses and non-profit organizations of the impacts of the project on their property.

All residents of the Study Area including minorities and lower income groups will benefit from positive impacts of a potential new Blue Water Bridge Plaza. Potential beneficial impacts include relief of local traffic congestion, increased border safety and security, job creation, and improved economic conditions for businesses that depend on trade.

No-Build Alternative: The No-Build Alternative will have no adverse impacts on any segment of the population including minorities and low income persons. However, the potential benefits of the Build Alternatives such as traffic congestion relief, job creation, general economic revitalization, and increased border safety and security would be lost.

City East Alternative: No minority or low income groups would receive disproportionately high and adverse impacts as a result of the construction of a new plaza in the City of Port Huron. The primary area of analysis for the City East Alternative consisted of 29 blocks surrounding the existing

plaza. Information on the population living in the City East Alternative analysis area is contained in the tables and graphs found in this section under Minority Groups in the Study Area. Approximately 9.4 percent of the residents surrounding the existing Blue Water Bridge Plaza would be considered part of a minority group. This percentage is smaller than the minority population percentage for the entire City of Port Huron, which is 15.5 percent. Two blocks located at the north end and the far east end of the Study Area are the only ones that contain greater than 15.5 percent minority population. The block at the north has 104 people, 42 of whom are minorities. The block at the far east end of the Study Area contains 17 people, six of whom are minorities. No property would be required from either of these blocks for the new plaza. The minority group with the greatest representation of its total population located within the blocks affected by the City East Alternative is American Indian/Alaskan Natives peoples. Approximately five percent (12 total residents) of Port Huron's total American Indian/Alaskan Native population live in the impacted blocks for the City East Alternative.



Ross Bible Church

The blocks affected by the City East Alternative contain a substantially lower percentage of residents living below the poverty level when compared with the whole City of Port Huron. **Figure 3.2.4 in Section 3.2 Communities and Neighborhoods**, illustrates an economic characteristics comparison. Approximately 10 percent of the City East Alternative area's residents live at or below the poverty rate, while the total for the City of Port Huron was approximately 17 percent. However, the median household income level (\$36,447) and average per capita income level (\$16,847) for the blocks affected by the City East Alternative were lower than the averages for the entire city of Port Huron.

The City East Alternative will affect Environmental Justice populations in a similar manner to the general population. All of the impacts for the City East Alternative discussed in **Chapter 3 The Environment: What's There Now and Project Effects** will affect various segments of the general population based on their proximity to the project and their use of the existing roads and border crossing in the Study Area. The City East Alternative would require the acquisition of approximately 133 acres of land around the existing Blue



Water Bridge Plaza east of the Black River in order to accommodate the new plaza and local road configuration. The 155 residences that would be relocated for the City East Alternative include minority, low-income, and elderly households. The potential relocation of 34 businesses currently operating in the Study Area will also affect low income, minority, and elderly households. The relocation effects of the City East Alternative are further discussed in **Section 3.6 Relocations**. The previous plaza and bridge improvements in the 1980s and 1990s displaced 33 residences and six businesses in the Study Area. There has been a cumulative pattern of plaza related impacts as discussed in **Section 3.7 Indirect and Cumulative Impacts**.

Neighborhood cohesion in the blocks surrounding the existing plaza would be divided as a result of plaza expansion at the existing location. Several local businesses would be relocated. This could present a challenge to the local low-income population to find sufficient alternatives to these departed businesses. Similar businesses to the relocated businesses, such as gas stations and restaurants would still exist in the Study Area. However, some unique businesses such as the bowling alley and dentist's offices would have greater effects if these or similar businesses do not locate at other sites near the Study Area. Low-income residents may be limited in personal transportation options and rely on public transit to reach similar businesses in other parts of the Port Huron area.

Neighborhood effects created by the City East Alternative will be the same for all persons regardless of race, income, or age. Environmental Justice populations will experience the same changes in access, emergency service routes and minor transit re-routing as the entire population. Changes in noise levels, as discussed in **Section 3.10 Noise**, will also affect low income, minority, and elderly households. The aesthetic and visual impacts of expanded plaza facilities, discussed in **Section 3.8 Aesthetic and Visual Impacts**, will affect Environmental Justice populations in the same manner as the general population. The City East Alternative will result in the reduction of the local tax base which will be felt by all Port Huron and Port Huron Township residents regardless of income, race, or age.

Environmental Justice populations and border crossers will share in the potential benefits of the City East Alternative. There will be traffic congestion relief resulting in reduced travel times for border crossings and travel on local roads. As discussed in **3.4 Economics**, excess border congestion is costly to local, state, and national economies. Border crossing improvements may lead to more jobs and reduced transportation costs, with widespread benefits to the general population including minorities and low-income persons in the United States and Canada. These groups will also share in the benefits of improved border security.

*City West (Preferred) Alternative:* The City West Alternative like the City East Alternative will not affect any minority or low-income groups with disproportionately high and adverse impacts. The primary area of analysis for the Preferred Alternative consisted of 29 blocks surrounding the existing plaza. Information on the population living in the Study Area is contained in **Table 3.3.1** and **Figure 3.3.1** to **Figure 3.3.4**. Approximately 9.4 percent of the residents surrounding the existing Blue Water Bridge Plaza would be considered part of a minority group. This percentage is smaller than the minority population percentage for the entire City of Port Huron, which is 15.5 percent. Two blocks located at the north end and the far east end of the Study Area are the only ones that contain greater than 15.5 percent minority population. The block at the north has 104 people, 42 of whom are minorities. The block at the far east end of the Study Area contains 17 people, six of whom are minorities. No property would be required from either of these blocks for the new plaza. The minority group with the greatest representation of its total population located within the blocks affected by the Preferred Alternative and the City East Alternative is American Indian/Alaskan Natives peoples. Approximately five percent (12 total residents) of Port Huron's total American Indian/Alaskan Native population live in the impacted blocks for both The City East Alternative and the Preferred Alternative.



Emergency service routes are one shared effect of the City West Alternative for all persons

The blocks affected by The City West Alternative contain a lower percentage of residents living below the poverty level when compared with the whole City of Port Huron. Approximately 10 percent of the Study Area's residents live at or below the poverty rate, while the total for the City of Port

Huron was approximately 17 percent. **Figure 3.2.4** in **Section 3.2 Communities and Neighborhoods** gives an economic characteristic comparison. However, the median household income level (\$36,447) and average per capita income level (\$16,847) for the blocks affected by the City West Alternative were lower than the averages for the entire city of Port Huron.

The Preferred Alternative like the City East Alternative will affect Environmental Justice populations in a similar manner to the general population. All of the impacts for the City West Alternative discussed in **Chapter 3 The Environment: What's There Now and Project Effects** will affect various segments of the general population based on their proximity to the project and their use of the existing roads and border crossing in the Study Area. The Preferred Alternative would require the acquisition of approximately 129 acres of land around the existing Blue Water Bridge Plaza east of the Black River in order to accommodate the new plaza and local road configuration. The 137 residences that would be relocated for the City West Alternative include minority, low-income, and elderly households. The potential relocation of 37 businesses currently operating in the Study Area will also affect low income, minority, and elderly households. The relocation effects of the Preferred Alternative are further discussed in **Section 3.6 Relocations**. The previous plaza and bridge improvements in the 1980s and 1990s displaced 33 residences and six businesses in the Study Area. There has been a cumulative pattern of plaza related impacts as discussed in **Section 3.7 Indirect and Cumulative Impacts**.

Neighborhood cohesion in the blocks surrounding the existing plaza would be divided as a result of plaza expansion at the existing location. Several local businesses would be relocated. This could present a challenge to the local low-income population to find sufficient alternatives to these departed businesses if comparable types of businesses are not located in the remaining commercial area as they may be limited in personal transportation and public transit service to outlying areas.

Neighborhood effects created by the City West Alternative will be the same for all persons regardless of race, income, or age. Environmental Justice populations will experience the

same changes in access, emergency service routes and minor transit re-routing. Changes in noise levels, as discussed in **Section 3.10 Noise**, will also affect low income, minority, and elderly households. The aesthetic and visual impacts of expanded plaza facilities, discussed in **Section 3.8 Aesthetic and Visual Impacts**, will affect Environmental Justice populations in the same manner as the general population. Similarly to the City East Alternative the Preferred Alternative will also result in the reduction of the local tax base which will be felt by all Port Huron and Port Huron Township residents regardless of income, race, or age.

Environmental Justice populations and border crossers will share in the potential benefits of the City East Alternative. There will be traffic congestion relief resulting in reduced travel times for border crossings and travel on local roads. As discussed in **3.4 Economics**, excess border congestion is costly to local, state, and national economies. Border crossing improvements may lead to more jobs and reduced transportation costs, with widespread benefits to the general population including minorities and low-income persons in the United States and Canada. These groups will also share in the benefits of improved border security.



The Township Alternative will relocate 29 businesses

*Township Alternative:* No minority population would receive disproportionately high and adverse impacts as a result of the construction of the Township Alternative. Local road improvements for the Township Alternative would affect many of the same blocks around the existing plaza as the City East and City West Alternatives. However, the Township Alternative would relocate 99 fewer homes than the City East Alternative and 81 fewer than the City West (Preferred) Alternative. Information on the population living in the Township Alternative analysis area is contained in **Table 3.3.1** and **Figure 3.3.1** to **Figure 3.3.4**. The five block area immediately surrounding the new plaza site in the Township Alternative has a total minority population of 4.2 percent. For Port Huron Township, the minority population is 7.9 percent of the total population. None of the five blocks contained greater than 20 percent minority population. Approximately 1.1 percent of the Study Area population surrounding the new plaza location was classified as Asian. This was the only minority group that had greater representation in the Study

Area as opposed to Port Huron Township as a whole. Approximately one-fourth (seven residents) of Port Huron Township's total Asian population (30 total residents) lived in the affected blocks.

For low income populations, the percentage of residents living at or below the poverty rate in the Study Area was slightly less than for Port Huron Township as a whole. Approximately 6.7 percent of the residents within the Study Area were living at or below the poverty rate, while that figure was 7.4 percent for Port Huron Township. However, like the City East and City West Alternatives the median household income level and average per capita income level were slightly less for the Study Area than the surrounding community as a whole. The homes that must be relocated for the Township Alternative are fewer and more spread out than the City East and City West Alternatives resulting in fewer impacts on community cohesion. Despite the secure corridor required for the Township Alternative, existing crossings of I-94/I-69 would be maintained.

The Township Alternative would affect Environmental Justice populations in a similar manner to the general population. As with the City East and West Alternatives, all of the impacts for the Township Alternative are discussed throughout **Chapter 3 The Environment: What's There Now and Project Effects** and would affect various segments of the general population based on their proximity to the project and their use of the existing roads and border crossing in the Study Area.

The Township Alternative would relocate minority and low-income households as part of the 56 residential relocations required for this alternative. As there are less overall relocations and fewer relocations in neighborhoods with low-income residents, the Township Alternative would result in fewer minority and low income households being relocated. The Township Alternative would relocate 29 businesses. The relocation effects of the Township Alternative are further discussed in **Section 3.6 Relocations**. The reductions in local tax bases that would result from the Township Alternative will be a burden for all groups including Environmental Justice populations.



Reduced congestion time is one benefit of the Township Alternative

Environmental Justice populations would share in the neighborhood impacts created by the Township Alternative. They will experience the same changes in access, emergency service routes, and minor transit re-routing as the entire population. Changes in noise levels, as discussed in **Section 3.10 Noise** would affect all community groups in similar manner, but not disproportionately affect low income and minority households. The aesthetic and visual impacts of expanded plaza facilities and the secured corridor for the Township Alternative discussed in **Section 3.8 Aesthetic and Visual Impacts**, will affect Environmental Justice populations in the same manner as the general population.

Environmental Justice populations, especially border crossers, will share the potential benefits of the Township Alternative. Reduced congestion and travel times for crossing the border and on local roads will benefit all users. As discussed in **3.4 Economics**, excess border congestion is costly to local, state, and national economies. Border crossing improvements may lead to more jobs and reduced transportation costs, with widespread benefits to general population including low income and minority populations in the United States and Canada. The benefits will be similar for the Township Alternative as the City East and City West Alternatives although local border crossers, including local Environmental Justice populations, will no longer have direct access to the border crossing from Pine Grove Avenue. Environmental Justice populations will also share in the benefits of improved border security.



Figure 3.3.2



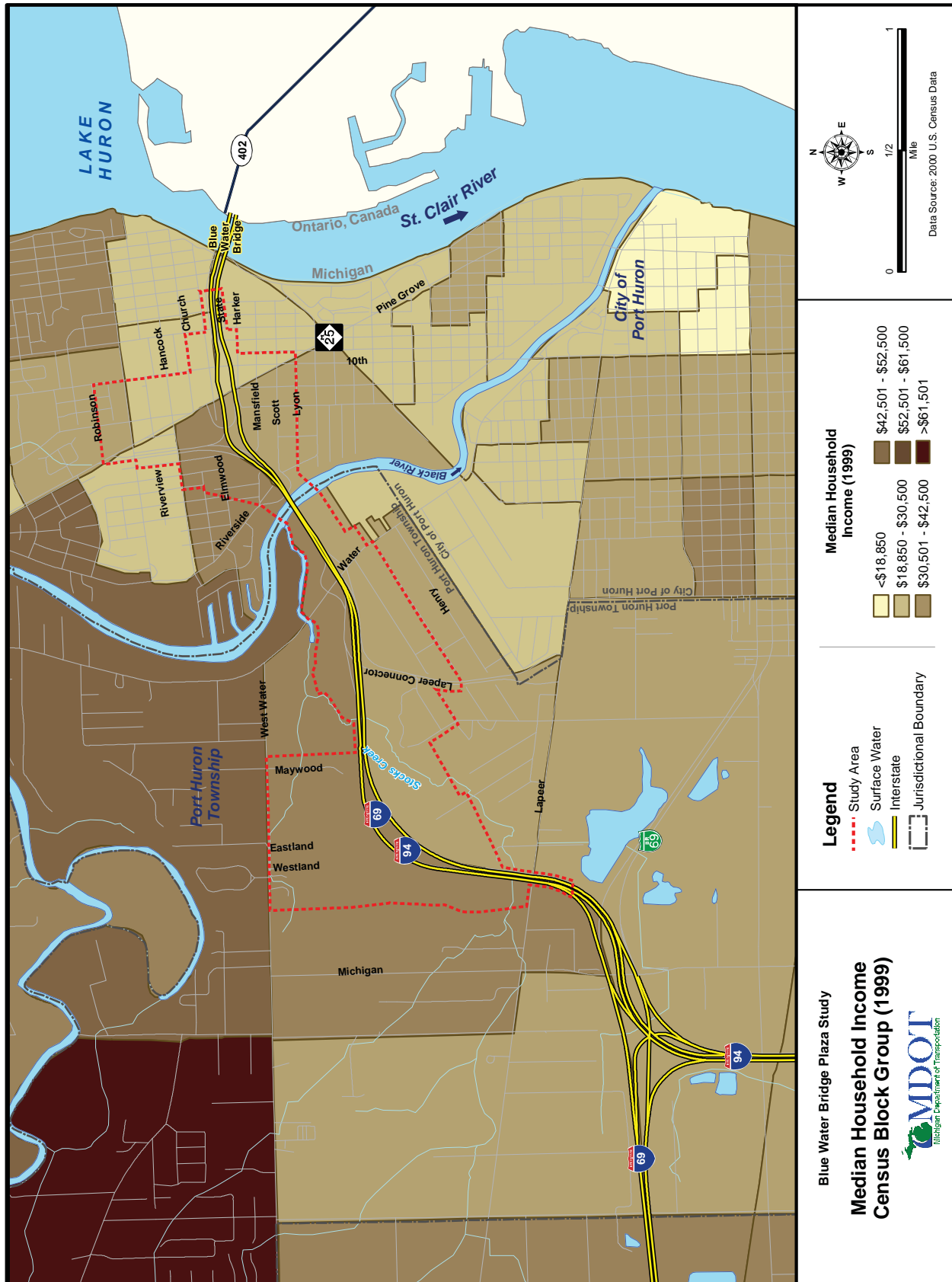


Figure 3.3.3

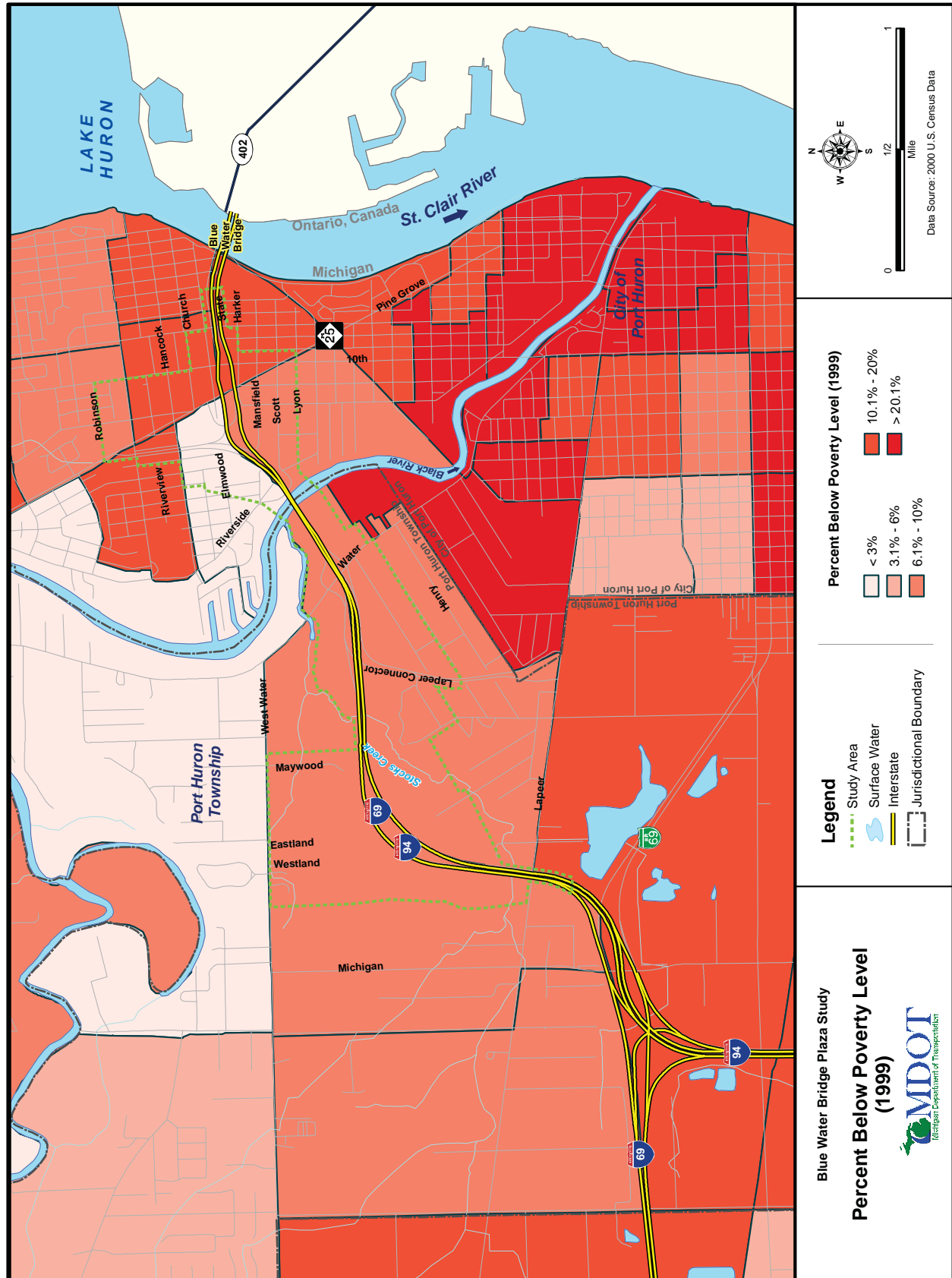


Figure 3.3.4

## 3.4 Economics

The movement of people and goods across the Blue Water Bridge affects local, regional, state, national and international markets and economic conditions. The United States Plaza at the Blue Water Bridge is a key part of the Blue Water Bridge border crossing system. The location of the plaza and its ability to efficiently and securely process people and goods entering and exiting the United States will impact all the markets. The presence of the Blue Water Bridge also affects local businesses by bringing people through the Port Huron area. A new plaza will also require some existing businesses to move and will remove land from the tax base of the City of Port Huron. This section discusses the impacts of the Alternatives Carried Forward on local businesses, tax bases, jobs, and trade.



Trucks Waiting to Enter the United States on the Existing Plaza

### 3.4.1 What are the Existing Local Economic Conditions?

Income and Poverty: **Section 3.2.4 What Are the Economic Characteristics of Study Area Residents?** discusses the income and poverty levels for the Study Area in detail. The per capita income of St. Clair County was \$21,582 in 2000, slightly below the Michigan average of \$22,168. The median household income for the County was \$46,313, slightly above the Michigan average of \$44,667 (U.S. Census, 2000). The portions of the Study Area in Port Huron Township generally have higher median incomes, higher housing values, and a lower poverty rate than the parts of the Study Area within the City of Port Huron.

Existing Businesses and Economic Activity: Travel-oriented businesses including gas stations, fast food and sit down restaurants, and hotels dominate the commercial areas of the Study Area. Additional commercial uses include professional offices, car dealerships, and private recreation facilities. The City of Port Huron has designated two commercial zones in the Study Area, the Blue Water Gateway Business Area and the Pine Grove Avenue Mixed Use Area. These commercial zones are discussed in **Section 3.1.1 What are the Land Uses in the Study Area?**



The Intersection of Pine Grove Avenue and Hancock Street has a lot of travel-oriented businesses

Downtown Port Huron is located less than two miles south of the existing Blue Water Bridge Plaza. Port Huron's downtown contains several city, county, and state office buildings. Downtown Port Huron also has approximately 70 restaurants, bars, and small stores. The City of Port Huron views its downtown as an attractive tourist destination for people coming from Canada or elsewhere in Michigan.

There is a commercial corridor along Pine Grove Avenue and 24<sup>th</sup> Avenue, north of the existing plaza in northern Port Huron and Fort Gratiot Township. Birchwood Mall, several other smaller shopping centers, and large free-standing retail stores are located approximately 3.5 miles north of the existing plaza on 24<sup>th</sup> Avenue. There are also a series of travel oriented businesses including restaurants, a gas station, and hotels at the Water Street Interchange.

The Port Huron Area has several other business and industrial areas. Other business locations are discussed in **Section 3.7.1 Why do We Look at Existing Conditions and Development Trends?**.

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**What is Meant by the Term Workforce?**

The workforce consists of all people 16 and over who are working or are actively looking for work.

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*Jobs:* Unemployment in St. Clair County is higher than the average for the State of Michigan. The unemployment rate in the City of Port Huron is higher than the rate for the County. **Table 3.4.1** lists the 2005 average unemployment rates and workforce sizes for the jurisdictions within the Study Area. Employment in St. Clair County is forecast to grow by 26 percent between 2000 and 2030 (2007 SEMCOG Profile for St. Clair County).

**Table 3.4.1 Unemployment and Workforce Data**

Workforce Characteristics	City of Port Huron	St. Clair County	State of Michigan
2005 Average Unemployment Rate	11.2%	7.9 %	6.7%
2005 Average Workforce Size	16,445	85,206	5,097,000
Source: Michigan Office of Labor Market Information. Annual unemployment is not measured for townships under 25,000 people.			

St. Clair County has nine industrial employers with more than 300 employees<sup>1</sup>. Most of these large private sector firms manufacture automobile-related components. Mueller Brass, with approximately 500 employees is the largest manufacturer in the City of Port Huron. Other major employers in the County include Detroit Edison, Port Huron Hospital, Mercy Health Services, and St. Clair County Community College. Approximately 485 individuals including federal inspection agents, MDOT staff, and customs brokers have jobs located in St. Clair County that are directly related to the Blue Water Bridge and Plaza. This makes the Blue Water Bridge and Plaza one of the top ten employers in the City of Port Huron and one of the top 20 employers in St. Clair County.

The Sarnia area has six industrial or office related employers with more than 300 employees. Chemical and rubber manufacturing are major industries in the Sarnia area. Major public sector employers include Blue Water Health, local school systems, and the Point Edward Charity Casino.<sup>2</sup>

Locations of Employment: Residents of the Port Huron area work throughout the county and beyond. **Figures 3.4.1 to 3.4.3** illustrate where residents of the City of Port Huron, Port Huron Township, and Fort Gratiot Township work. **Figures 3.4.4 to 3.4.6** illustrate where employees who work in the City of Port Huron, Port Huron Township, and Fort Gratiot Township live. This information is taken from the United States Census and represents United States residents only.

Based on discussions with several major employers, the Study Team is aware of at least 200 residents of Canada who work in the Port Huron area and must use the Blue Water Bridge to get to work. According to Census 2000, there are 36 St. Clair County residents who work in Canada and also rely on crossing the border to get to work. These maps illustrate the major commuting patterns in the area and assist in the analysis of how changes in access to the Blue Water Bridge Plaza and improvements along I-94/I-69 and to local roads may affect workers and businesses.

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<sup>1</sup> Data on major St. Clair County Employers is from the Michigan Economic Development Corporation, Profile of St. Clair County.

<sup>2</sup> Ontario Investment Service Data.

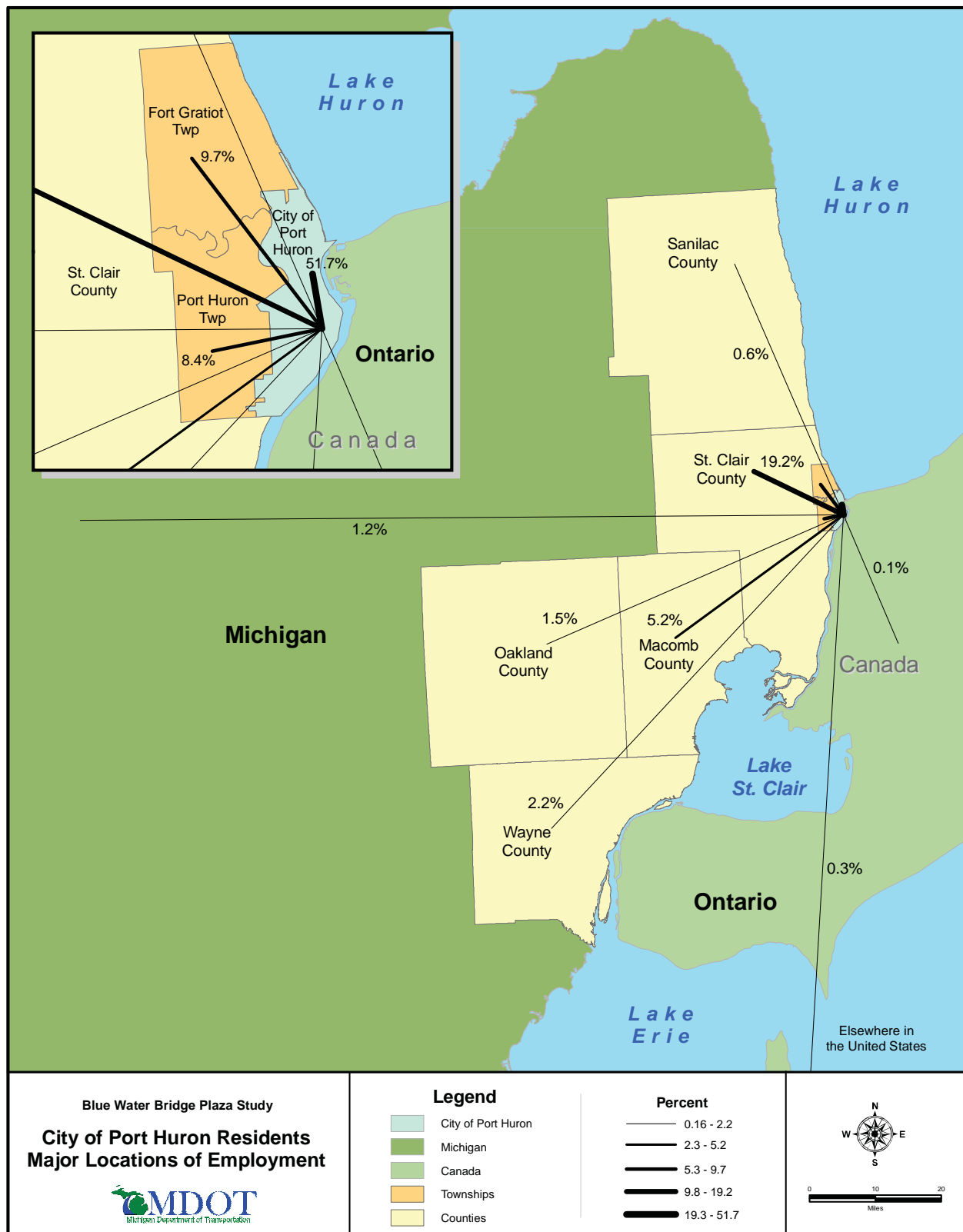


Figure 3.4.1

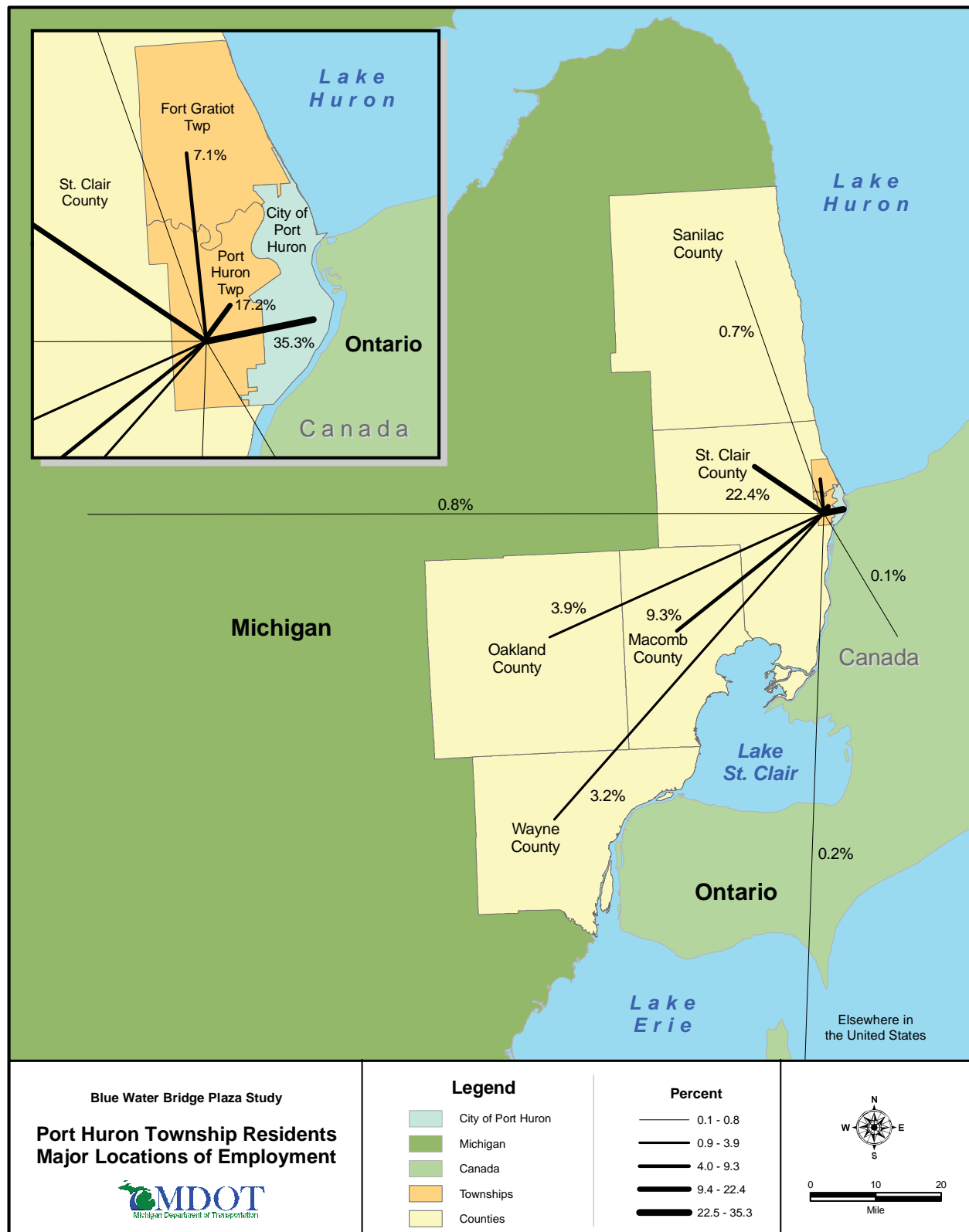


Figure 3.4.2



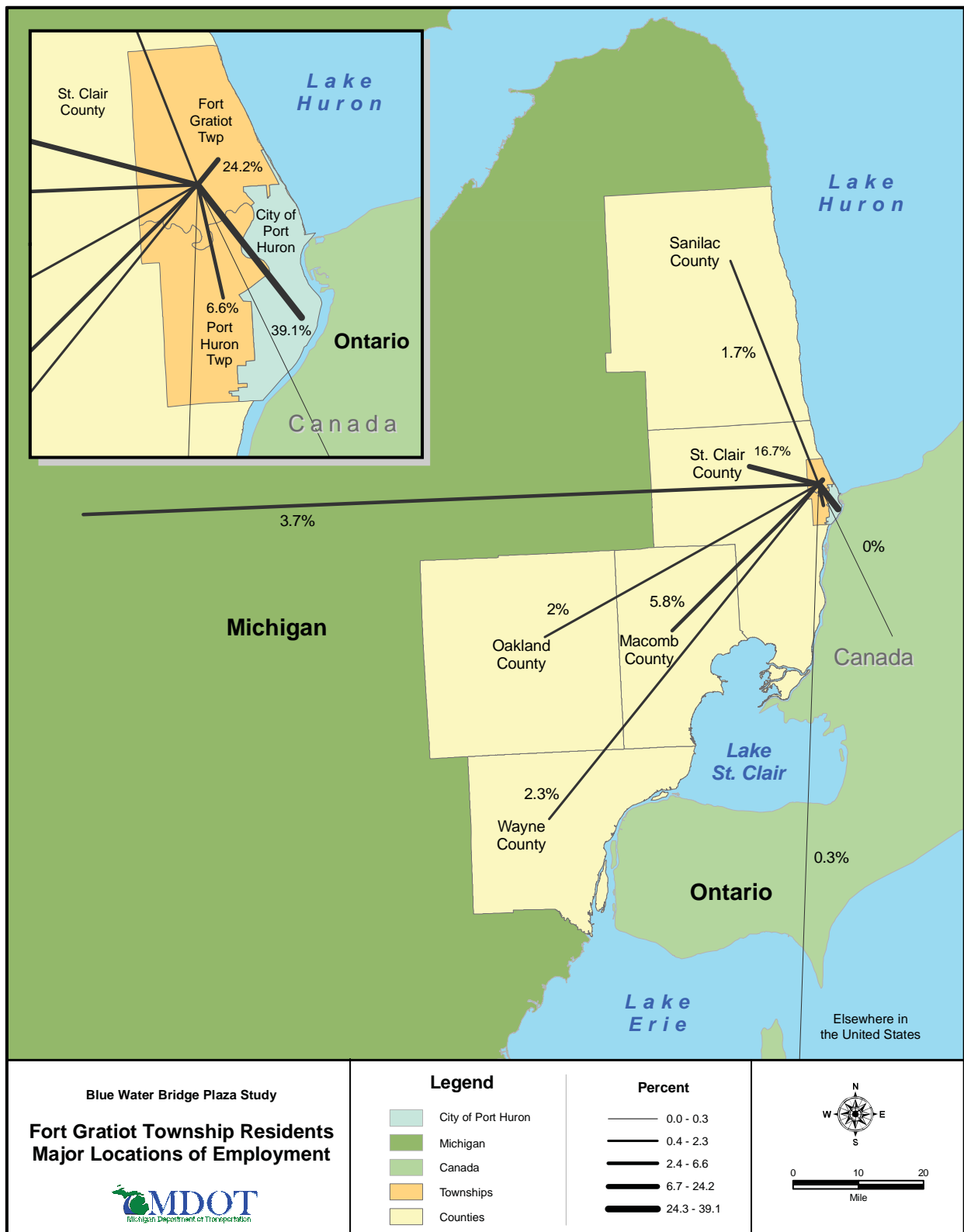


Figure 3.4.3

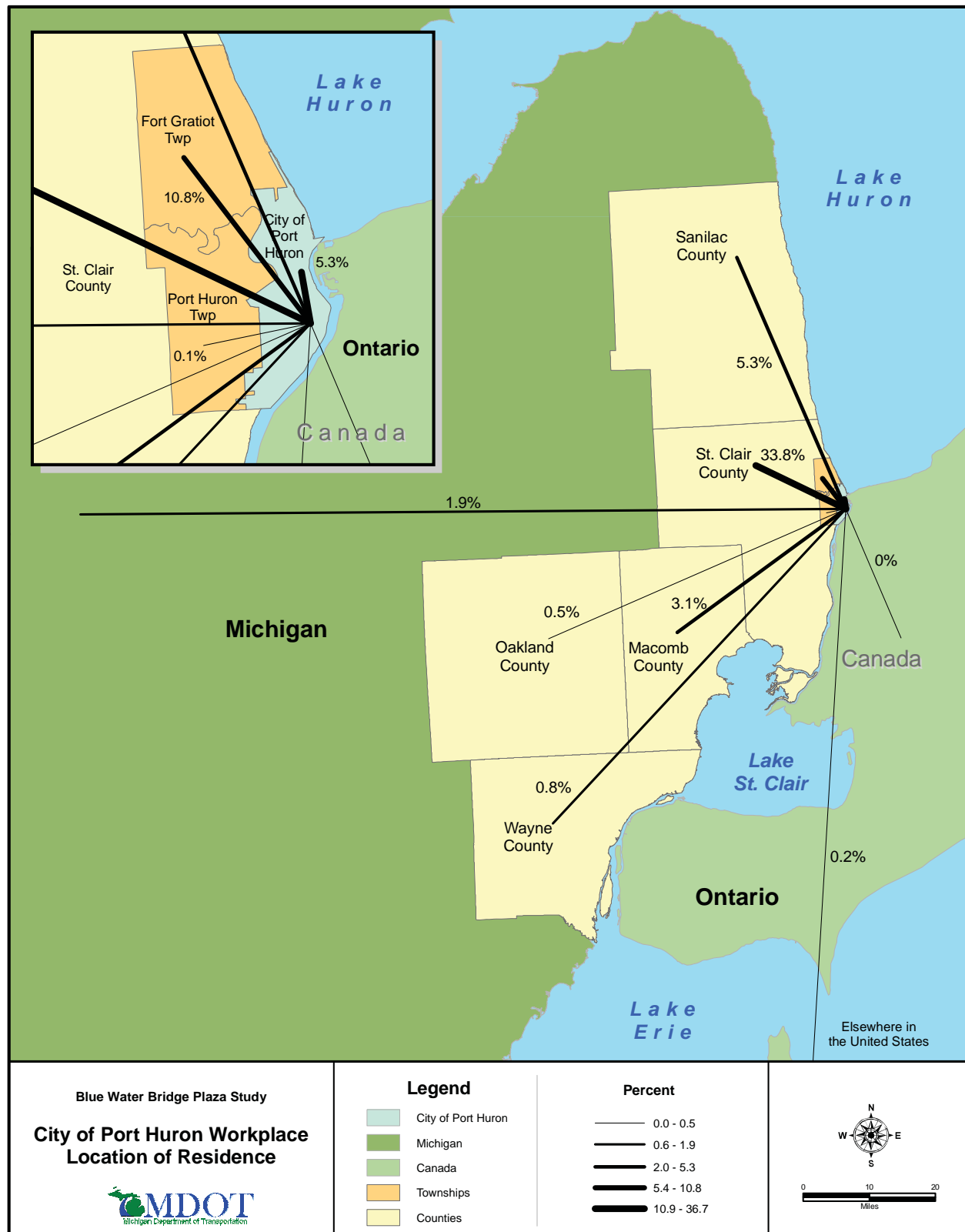


Figure 3.4.4



Figure 3.4.5

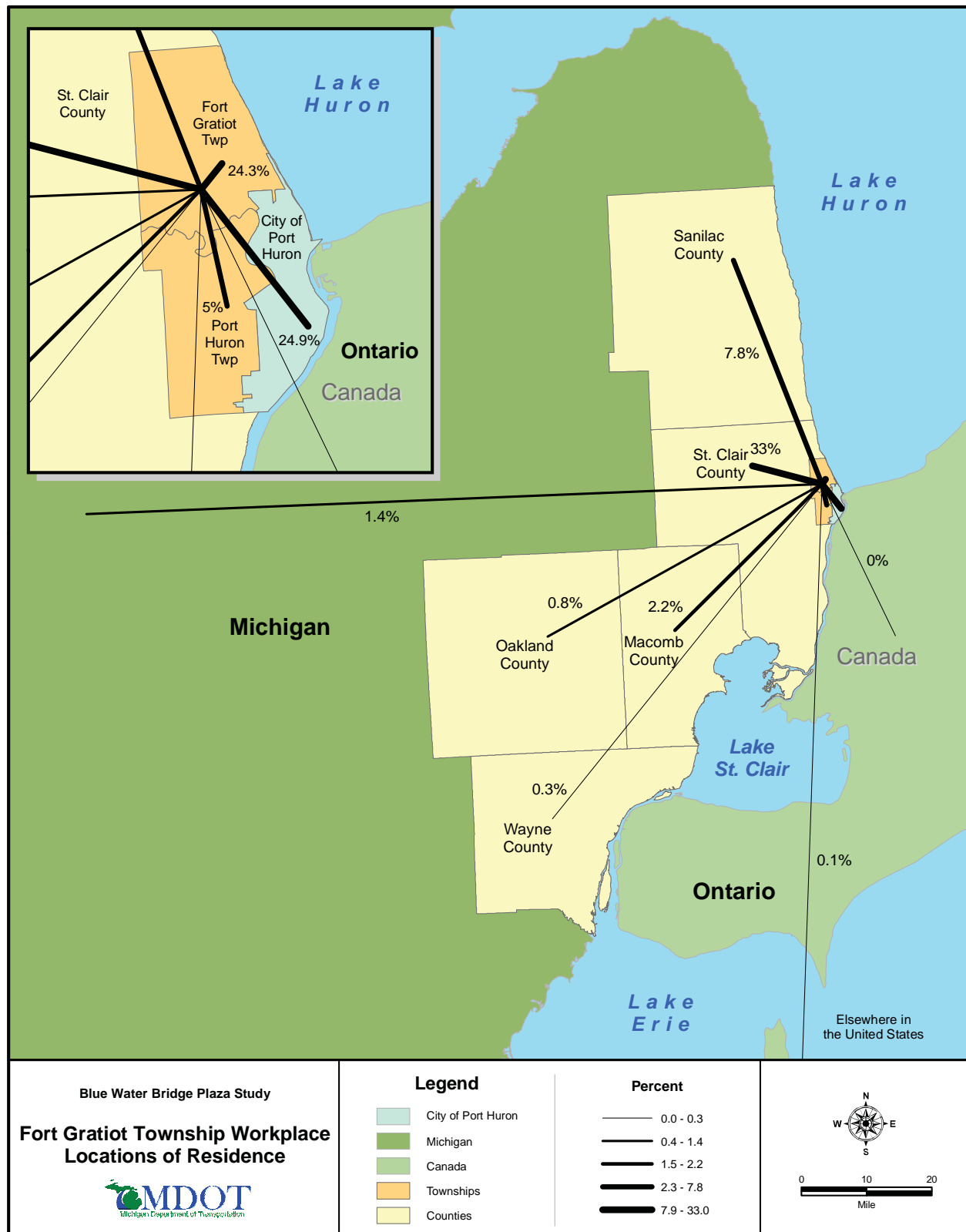


Figure 3.4.6

### 3.4.2 How Important is the Blue Water Bridge to Businesses and Trade?



**The North American Automobile Industry depends on border crossings**

The Blue Water Bridge is one of the United States' busiest border crossings for both trucks and cars. In 2005, over \$38 billion in goods crossed the Blue Water Bridge by truck, over \$100 million per day. Approximately 14 percent of the truck trade between the United States and Canada crosses the Blue Water Bridge in Port Huron.

The automobile and automobile parts industries are very important parts of the economies of both the United States and Canada, especially in Michigan and Ontario. The automobile industry depends heavily on the quick transportation of goods across the border. Parts plants in Ontario provide supplies to car factories in Michigan and vice-versa. A car or truck may contain parts that have been partially assembled at multiple plants on both sides of the border. In 2000, automotive related trade accounted for \$58 billion of the \$93 billion in total Ontario exports to the Central-Eastern U.S. (mainly Michigan) as well as \$28 billion of \$74 billion of Ontario imports from the Central Eastern U.S.<sup>3</sup> The Blue Water Bridge, along with other Michigan Border Crossings, is a key link in keeping the automobile industry and other industries working.

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#### **What Are Travel-Oriented Businesses?**

Travel oriented businesses are businesses that serve travelers such as gas stations, restaurants, and hotels. Most travel oriented businesses also serve local customers. A lower percentage of customers will have planned to stop at a specific travel-oriented business than at other types of businesses. Customers tend to shop at travel oriented businesses because of their convenient location, not because they provide unique goods or services.

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Most of the business and trade benefits of the Blue Water Bridge and Plaza are felt by industries, workers, and business owners located throughout Michigan and Ontario and across the United States and Canada. However, the Blue Water Bridge is also an important part of the local Port Huron and Sarnia Area (Lambton County, Ontario) economy. There are three major ways that the presence of the Blue Water Bridge helps the local economy. First, there are Port Huron area businesses and agencies that use the bridge to transport goods and people across the border, and benefit from the bridge and plaza the same way as businesses outside the Port Huron area do. Second, the Blue Water Bridge Plaza has approximately 485 federal, state, and private business employees. Most of these employees live in the Port Huron area. If the border crossing were located elsewhere, these jobs would not exist in

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<sup>3</sup> *Transportation and Trade, Chapter 7 of Transportation in Canada.*  
Transport Canada, 2002.

the Port Huron area. Third, travelers that use the Blue Water Bridge also visit local businesses. Over 15,000 cars and trucks cross the Blue Water Bridge on an average day. Only 13 percent of these border crossings are made by vehicles that begin their trip in St. Clair County. More than 13,000 vehicles from other places in Canada or the United States pass through or stop in the Port Huron area on an average day.<sup>4</sup> Some of the drivers and passengers of these 13,000 vehicles will stop for food, lodging, gasoline, supplies, tourist attractions and other business reasons in the Port Huron area. The vast majority of these travelers would have no reason to pass through the Port Huron area if the border crossing was located in another community.

### 3.4.3 Assumptions and Methodologies

Business Impact Analysis: In assessing business impacts the Study Team examined the businesses that would be relocated and identified how any access changes would affect remaining businesses.

Tax Base Analysis: Local property tax base impacts are discussed based on the taxable value of parcels that must be acquired for right-of-way, for the alternatives. Tax roll data was collected from the City of Port Huron and Port Huron Township to assist in the calculation of the property tax impacts. Future changes in taxable value due to the impacts of a particular alternative on neighboring parcels are not accounted for in the assessment, as it is extremely difficult to forecast the impacts of a transportation project on the taxable value of a property.

Job Impact Analysis: Study Team members contacted businesses in the Study Area to develop estimates of the jobs that would be relocated as part of the potential business relocations. Based on employment at similar businesses, the Study Team estimated the number of relocated jobs for businesses for whom employment data was unavailable. The Study Team also estimated the number of construction and other related jobs that would be created by the investment of

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#### What is the Property Tax Base?

The property tax base of a community is the combined taxable value of all properties in the community. This includes the taxable value of real estate and of personal property such as equipment owned by businesses. The property tax base is different from property taxes. Property taxes are calculated by multiplying the property tax base by the property tax rates for the community.

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<sup>4</sup> Ontario – Michigan Border Crossing Traffic Study – Technical Report. Michigan Department of Transportation, 2001. and NRS/MTO Commercial Vehicle Survey, 1999/2000.

state dollars in the proposed project using statewide average estimates of jobs created per dollar of investment in construction.

Cost of Congestion Analysis: In 2003, Dr. John C. Taylor, Dr. Douglas Robideaux, and Dr. George C. Jackson prepared a paper: The U.S.-Canada Border: Cost Impacts, Causes, and Short to Long Term Management Options for the United States, Michigan, and New York Departments of Transportation. The paper identified many different costs associated with border crossings between the United States and Canada. The cost of congestion analysis prepared for the Blue Water Bridge Plaza Study is based in part on the methodology contained in this paper, as discussed below.

#### **3.4.4 How Would a No-Build Alternative Affect Businesses, Taxes, Jobs, and Trade?**

The No-Build Alternative will have minimal effects on existing local businesses and local tax bases. The No-Build Alternative will have negative impacts on trade between the United States and Canada and between Michigan and Ontario due to increasing levels of plaza congestion causing longer delays for shipments across the Blue Water Bridge.

Impacts on Existing Local Businesses: The No-Build Alternative will have very minor impacts on existing local businesses. No businesses are relocated and there are no access changes that would affect existing business patterns.

Tax Base Impacts: There is no new right-of-way required for the No-Build Alternative and thus no direct impacts to the property tax base for any community. As the plaza would remain in Port Huron, there would be no impacts to the city income tax collected from plaza employees.

The No-Build Alternative would have long-term negative impacts on the tax bases of the United States, Canada, Michigan, and Ontario to the extent that revenues from international trade are harmed by border congestion. The potential trade and economic impacts of the alternatives are discussed in the following paragraphs.



*Job Impacts:* As the No-Build alternative involves no property acquisition or changes in access, it is unlikely to have any direct impacts on local employment. Jobs related to trade and trucking would be negatively affected by a No-Build Alternative to the extent that congestion and backups raise the cost of transporting goods across the border, resulting in negative impacts on trade between the United States and Canada. There are substantial congestion issues at each of the major border crossings between Michigan and Ontario. Cars and trucks will not be able to avoid border congestion by diverting to other crossings.

Other studies have suggested that there will be high job losses unless the Michigan border crossings, including the Blue Water Bridge, are improved. A study completed for the Border Transportation Partnership concluded that approximately 90,000 full time jobs would be lost in the United States and approximately 35,000 full time jobs would be lost in Canada if improvements are not made to border crossings between Ontario and Michigan<sup>5</sup>.

**Figures 3.4.1 to 3.4.3** show that approximately 11 percent of employed City of Port Huron residents and 16 percent of employed Fort Gratiot Township residents work outside of St. Clair County. Many of these workers will use the roadways in the Study Area as part of their commute to and from work. Approximately 46 percent of employed Fort Gratiot Township residents work in the City of Port Huron or Port Huron Township and 10 percent of employed City of Port Huron residents work in Fort Gratiot. Most of these workers will pass through the Study Area as part of their journey to work each day. Congestion and backups within the Study Area and along I-94/I-69 due to the selection of a No-Build Alternative will lengthen the commute times for Port Huron Area workers traveling through the Study Area.

*Trade Impacts:* As discussed in **Chapter 1 Why Are Improvements Needed?**, the No-Build Alternative would result in the worsening of traffic backups and congestion on the United States Plaza at the Blue Water Bridge. Future

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#### **Why Does Uncertainty in Border Crossing Time Hurt the Economy?**

Many manufacturers rely on parts arriving at their plants just when they need them. They do not want to pay for large warehouses of parts. Uncertainty in the time it takes to cross the border means that parts from factories on the other side of the border may not arrive when they are needed. As a result, manufacturers have to keep and store an extra supply of parts just in case of supply delays or risk having to shut down production. Keeping extra part supplies raises the cost of manufacturing.

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<sup>5</sup> *Regional and National Economic Impact of Increasing Delay and Delay Related Costs at the Windsor-Detroit Crossings*. Canada-United States, Ontario-Michigan Border Transportation Partnership, 2004.

backups and congestion under a No-Build condition would have a negative effect on international trade. Backups and congestion are costly for trucking firms and the traveling public. The costs of backups and congestion include wages for drivers waiting to cross, lost productivity of trucks, and a reduction in the number of daily trips drivers can make across the border. The backups and congestion also cost trucking firms and manufacturers because of the uncertainty they create in the delivery process. Many industries in Ontario and Michigan, especially the auto industry, depend on parts from both sides of the border. Dealing with anticipated delays can be very costly due to production shut downs or the need to have an excess inventory of parts in case of delayed shipment.

Based on the methodology and assumptions developed by Taylor et al., the Study Team analyzed the cost of congestion and backups at the United States plaza. This analysis only included costs directly related to congestion and backups such as:

- Costs of truck waiting time at primary inspection
- Costs of truck secondary inspection processing time
- Costs of excess carrier company planned time for border crossings above actual crossing times, which could not be recouped
- Costs of a reduced number of driving cycles (trips back and forth between destinations) due to congestion at the border
- Extra costs for excess manufacturers inventory that must be kept due to uncertainty in border crossings, and
- Costs of passenger vehicle transit time at primary inspection

The analysis concluded that the estimated cost of congestion and backups was \$160 million in 2006 and would be cumulatively \$4.3 billion (2006 Dollars) between 2010 and 2030 if the No-Build Alternative is selected instead of one of the Build Alternatives based on the bulleted analysis criteria above.

Excess inventory held by manufacturers to deal with uncertainty and waiting times for trucks at primary inspection made up the largest share of the estimated cost of congestion.

These costs are felt directly by trucking companies, manufacturers, and individuals crossing the border. The costs may also be passed on to consumers in the form of higher prices to account for higher transportation and inventory storage costs.

Fuel consumption will also increase for both border crossers and local traffic caught in plaza related congestion and backups. This would increase the cost of transporting goods and costs for commuters to get to work.

### **3.4.5 How Would the City East Alternative Affect Businesses, Taxes, Jobs, and Trade?**

Economic effects of the City East Alternative would include the relocation of local businesses, changes in access for local businesses, and impacts to the local tax bases for the City of Port Huron and Port Huron Township. The City East Alternative also would reduce future congestion at the Blue Water Bridge border crossing, providing positive economic benefits to trucking firms and other companies and individuals involved in cross-border trade. The economic effects of the City East and City West Alternatives would be similar, with minor differences in business relocations, tax base impacts and effects of changes in local access and traffic patterns.

Impacts on Existing Businesses: As discussed in detail in **Section 3.6 Relocations**, the City East Alternative relocates 34 businesses. Approximately 75 percent of the relocated businesses own their site while the others lease their business location. These businesses may choose to relocate to a different jurisdiction, a different part of the community, or remain close to their existing location if possible. Some changes in existing business patterns for residents and business owners in the vicinity of the plaza are inevitable with this number of commercial relocations. The City East Alternative eliminates six vacant business sites within the City of Port Huron's designated Blue Water Gateway Business Area or the Pine Grove Avenue Mixed Use Area. The total number of business relocations in the vicinity of the existing plaza and the conversion of several business sites to plaza use represent significant economic impacts on the local

community. Some of the potential relocations are due to the need to acquire parts of the land of a business but not the whole property. In these cases MDOT may be able to work out an agreement so that the business can remain in its existing location if the property owner is interested. Relocated and new businesses would likely develop on available sites in the vicinity of the new plaza.



Looking north along Pine Grove Avenue from the plaza

The City East Alternative changes a key access route for remaining businesses through the relocation of Pine Grove Avenue to 10<sup>th</sup> Street. The City East Alternative maintains access to businesses in the vicinity the existing plaza by providing similar ramps to and from the existing plaza. Travel times for cross-border traffic to access businesses in the vicinity of the plaza, along M-25, and to downtown Port Huron will improve during periods of high traffic volumes due to plaza improvements. Travel times to businesses remaining in the vicinity of the plaza will be similar to existing conditions. The changes in access to most remaining businesses in the vicinity of the plaza are minor. Existing businesses would not be bypassed. As a result, economic impacts to existing businesses due to changes in access would be minor.

The City East Alternative would have minimal effect on businesses in downtown Port Huron. The alternative would add a ramp between I-94/I-69 and the proposed Pine Grove Avenue/10<sup>th</sup> Street combination. This ramp would provide more direct access for eastbound travelers to get to downtown Port Huron and would help support economic development efforts focused on the area between the plaza and downtown. The City East Alternative does not change access to northern Port Huron or Fort Gratiot Township except for the Pine Grove Avenue/10<sup>th</sup> Street combination. This combined street is forecast to operate efficiently so the City East Alternative would have minimal effects on access to businesses in northern Port Huron or Fort Gratiot Township.

The City East Alternative would relocate two businesses on the south side of the Water Street Interchange. Three other businesses would be affected due to minor partial property acquisition and driveway access issues during construction. Other businesses at Water Street should not be affected as

Water Street will remain a full access interchange and will remain as the first exit off of I-94/I-69 past the plaza.

Tax Base Impacts: **Table 3.4.2** lists the local property tax base impacts by alternative.

**Table 3.4.2 Local Property Tax Base Impacts – 2006 Dollars**

Alternative	City of Port Huron			Port Huron Township		
	Taxable Value Lost \$Millions	Total Taxable Value \$Millions	Percent of Total Taxable Lost	Taxable Value Lost \$Millions	Total Taxable Value \$Millions	Percent of Total Taxable Lost
<b>No-Build</b>	\$0.0	\$756.0	0.0%	\$0.0	\$281.2	0.0%
<b>City East</b>	\$11.3	\$756.0	1.5%	\$1.4	\$281.2	0.5%
<b>City West</b>	\$10.6	\$756.0	1.4%	\$1.4	\$281.2	0.5%
<b>Township</b>	\$5.2	\$756.0	0.7%	\$3.6	\$281.2	1.3%
Source: Raw Property Tax Data provided by City of Port Huron and St. Clair County.						

MDOT would not pay property taxes on the property purchased for a new plaza and other roadway improvements. The City of Port Huron would fore go approximately 1.5 percent of its existing property tax base if the City East Alternative was constructed. The property tax base of the City of Port Huron grew approximately 4.4 percent annually between 2003 and 2006. The loss of tax base to the City of Port Huron would be less than one year's annual growth in taxable value. This loss of taxable value would represent a permanent reduction in the taxable property to the City of Port Huron's revenue and thus would affect budgets and programs. A better facility will make the area more attractive to this developmental tax base.

Port Huron Township would lose approximately 0.5 percent of its existing property tax base if the City East Alternative was constructed. The property tax base of Port Huron Township grew approximately 5.5 percent annually between 2003 and 2006. The loss of tax base to Port Huron Township would also be less than one year's annual growth in taxable value. This loss of taxable value would represent a permanent loss to Port Huron Township's revenue.

St. Clair County and the Port Huron Area School District would also lose tax base as a result of the City East

Alternative. These jurisdictions have larger tax bases than the City of Port Huron and the resulting losses to their tax bases would be a much smaller percentage.

A 160 unit housing development was to be constructed on land where the new MDOT Welcome Center would be located. This land would no longer be available for housing if the City East was constructed. At an average taxable value of \$90,000 per unit, based on an average selling price of \$160,000 to \$200,000 per unit, this would represent a lost opportunity of over \$14 million each year in potential future tax base for the Township. This is based on complete build-out of the housing development.

If the City East Alternative is constructed, the home and business owners that remain around the plaza may experience changes in their property values and property taxes. It is very difficult to isolate the effect of transportation improvements on the value of particular parcels of lands. Some parcels may increase in value due to improved access while other properties may lose value due to noise or visual impacts. A property, which may have lower value as a residential property, may also have a much greater value as a potential business site. It is also difficult to differentiate between the effects of the project and changes in values due to property improvements or changes in the local market. As a result, MDOT does not attempt to assess the potential changes in value for individual properties that do not need to be purchased for the project. MDOT does not directly compensate property owners for potential losses in property values due to their proximity to the project nor does MDOT charge property owners for any potential additional value created by the project.

The City of Port Huron has a local income tax that plaza workers are subject to. The City East Alternative keeps all of the existing plaza jobs in the City of Port Huron. The additional potential CBP and MDOT staff to operate the expanded plaza would also be subject to Port Huron's local income tax. Workers employed at businesses required to relocate by the new plaza would still be subject to the Port Huron income tax if they live in the city or if the business relocates within the city limits. There could be local income

tax revenue reductions if businesses and residents who must relocate because of the City East Alternative chose to move to other communities.

The construction and operation of the City East Alternative would substantially reduce or eliminate the estimated \$4.3 billion in trade costs due to excess congestion discussed above for the No-Build Alternative. This will lead to increased revenue and employment for industries that rely on the border crossing to ship products and parts between the United States and Canada. Increased revenue and jobs will translate into tax benefits to the United States, Michigan, Canada, and Ontario.

*Job Impacts:* The City East Alternative will impact jobs through the relocation of jobs that are connected with businesses to be displaced. **Table 3.4.3** lists the estimated job relocations for the City East Alternative as well as the other Alternatives Carried Forward.

**Table 3.4.3 Estimated Local Job Relocations**

<b>Alternative</b>	<b>City of Port Huron Job Relocations</b>	<b>Port Huron Township Job Relocations</b>
<b>No-Build</b>	0	0
<b>City East</b>	375	15
<b>City West</b>	385	15
<b>Township</b>	280	115

The City East Alternative would displace businesses with a total estimated employment of 390 people. If some of the displaced businesses choose to shut down or move outside of the Port Huron area, there would be a loss of local jobs. The City East Alternative would benefit national employment by decreasing the cost of transporting goods across the border and increasing revenue and efficiency for firms that rely on the border crossing to ship products and parts between the United States and Canada.

The investment of construction dollars for the project will result in the creation of new jobs. When an investment is made in the construction of a new facility, the companies and individuals receiving payment for building the project will in turn spend the money they receive on other goods and



services. Companies and individuals receiving benefits in terms of reduced travel time and accident costs would also invest portions of these savings in the local and state economies. Based on the estimated construction cost for the City East Alternative of \$237 million, the Study Team estimates that 4,310 jobs will be created over a five-year construction period. Most of these jobs will be short-term construction related positions. Local job benefits from construction of the alternative constructed would depend in part on the availability of local materials and workers. MDOT seeks the best possible value from its investments when tendering construction projects and, like any other project, there is no guarantee local firms would be selected or local materials used.



Downtown Port Huron

*Trade Impacts:* The City East Alternative would result in positive impacts on trade and commerce across the Blue Water Bridge through a reduction in travel times and congestion. Reduced congestion will lead to less uncertainty in border crossings, allowing firms that transport goods across the border to meet just in time delivery schedules with less warehouse inventory required. The earlier discussion of the No-Build Alternative identified the cost of excess congestion and delay between 2010 and 2030 as \$4.3 billion in 2006 dollars. All Build Alternatives will reduce congestion to a minimum by providing the facilities needed to the future substantial backups for the No-Build Alternative. The City East Alternative would thus result in an estimated savings to the United States and Canadian economies of more than four billion during its first 20 years of operation.

#### **3.4.6 How Would the Preferred (City West) Alternative Affect Businesses, Taxes, Trade, and Jobs?**

The City West Alternative would have similar impacts on businesses, local tax base, trade, and jobs as the City East Alternative. The two alternatives would have minor differences in business and tax base impacts due to differences in the quantity and location of the properties that would need to be purchased. The City West Alternative would have different effects on remaining businesses due to the realignment of Pine Grove Avenue to the west of the new plaza instead of to the east as is the case for the City East

Alternative. The City West Alternative also would reduce future congestion at the Blue Water Bridge border crossing, providing positive economic benefits to trucking firms and other companies and individuals involved in cross-border trade.

Impacts on Existing Businesses: As discussed in **Section 3.6 Relocations**, the City West Alternative relocates 37 businesses. Approximately 75 percent of the relocated businesses own their site while the others lease their location. The relocated businesses may choose to move to a different community or remain close to their current location if possible. Some changes in existing businesses patterns for residents and business owners in the vicinity of the plaza are inevitable with this number of business relocations. The City West Alternative also eliminates six vacant business sites within the City of Port Huron's designated Blue Water Gateway Business Area or the Pine Grove Avenue Mixed Use Area. The total number of business relocations in the vicinity of the existing plaza and the conversion of several potential business sites to plaza use represent significant economic impacts on the local community. Some of the potential relocations are due to the need to acquire parts of the land of a business but not the whole property. In these cases MDOT may be able to work out an agreement so that the business can remain in its existing location if the property owner is interested. Relocated and new businesses would likely develop on available sites in the vicinity of the new plaza.

The City West Alternative changes a key access route for remaining businesses through the relocation of Pine Grove Avenue to the west of the new plaza. As a result, Pine Grove Avenue will no longer be a through traffic route for the commercial block north of the plaza between Hancock Street and Riverview Street. That stretch of Pine Grove Avenue currently carries approximately 21,000 cars on an average day. Following the re-routing of Pine Grove Avenue as result of the City West Alternative, that stretch of road will likely carry a small fraction of this original traffic level. This reduction in traffic levels will have an impact on businesses such as gas stations and fast food restaurants that depend on pass by traffic for a certain portion of their customers. The relocated northbound lanes of Pine Grove Avenue would connect with

the existing Pine Grove Avenue near Riverview Street, so this one block of businesses should still be visible from the main route. The impact on existing businesses could be reduced by signing and driveway access changes that encourage traffic using the realigned Pine Grove Avenue to visit the bypassed businesses. These commercial blocks are also a likely future location for businesses serving border crossing traffic. Several businesses that are displaced by the City West Alternative may wish to relocate to these blocks north of the plaza.



The Blue Water Twin Bridges

The City West Alternative will maintain border traffic access to businesses remaining in the vicinity of the existing plaza by provided ramps between the plaza and the realigned Pine Grove Avenue. Travel times for cross-border traffic to access businesses in the vicinity of the plaza, along M-25, and to downtown will improve during periods of high traffic volumes due to plaza improvements.

The City West Alternative would have minimal effect on businesses in downtown Port Huron. The alternative would include direct ramp access between I-94/I-69 and the realigned Pine Grove Avenue. This access will make it easier for eastbound travelers to get to downtown Port Huron and would help support economic development efforts focused on the area between the plaza and downtown. The alternative provides an intersection between the local access ramp from the plaza and Pine Grove Avenue. This will allow traffic exiting the plaza to turn toward downtown Port Huron more easily than with existing plaza access. The City West Alternative does not change access to northern Port Huron or Fort Gratiot Township except for the realignment of Pine Grove Avenue. The realigned Pine Grove Avenue is forecast to operate efficiently so the City West Alternative would have minimal effects on access to businesses in northern Port Huron or Fort Gratiot Township.

The City West Alternative would relocate two businesses on the south side of the Water Street Interchange. Three other businesses would be affected due to minor partial property acquisition and driveway access issues during construction. Other businesses at Water Street should not be affected as Water Street will remain a full access interchange and will remain as the first exit off of I-94/I-69 past the plaza.

*Tax Base Impacts:* The tax base impacts of the City West Alternative are shown in **Table 3.4.2**. MDOT would not pay property taxes on the property acquired for the new plaza. The City of Port Huron would lose approximately 1.4 percent of its existing property tax base if the City West Alternative was constructed. The property tax base of the City of Port Huron grew approximately 4.4 percent annually between 2003 and 2006. The loss of tax base to the City of Port Huron would be less than one year's annual growth in taxable value. This loss of taxable value would represent a permanent loss to the City of Port Huron's revenue and would affect budgets and programs.

Port Huron Township would lose approximately 0.5 percent of its existing property tax base if the City West Alternative was constructed. The property tax base of Port Huron Township grew approximately 5.5 percent annually between 2003 and 2006. The loss of tax base to the Port Huron Township would also be less than one year's annual growth in taxable value. This loss of taxable value would represent a permanent loss to Port Huron Township's revenue.

St. Clair County and the Port Huron Area School District would also lose tax base and tax revenue as a result of the City West Alternative. These jurisdictions have larger tax bases than the City of Port Huron and the resulting losses to their tax bases would be a much smaller percentage. Also, the tax base loss would be partially offset by the value of new development.

A 160-unit housing development was to be constructed on land where the new MDOT Welcome Center would be located. This land would no longer be available for housing if the City West Alternative was implemented. At an average taxable value of \$90,000 per unit, based on an average selling price of \$160,000 to \$200,000 per unit, this would represent a loss of over \$14 million each year in potential future tax base for the Township. This is based on complete build-out of the housing development.

The City West Alternative may cause changes in the property values and property taxes for homes and business owners that remain in the vicinity of the plaza. It is very difficult to isolate



Chippewa Middle School



Blue Water Bridge Span

the effect of transportation improvements on the value of particular parcels of land in an urban area. Some parcels may increase in value due to improved access while other parcels may lose value due to noise or visual impacts. A property, which may have lower value as a residential property, may also have a much greater value as a potential business site. It is also difficult to differentiate between the effects of the project and changes in values due to property improvements or changes in the local market. As a result, MDOT does not attempt to assess the potential changes in value for individual properties that do not need to be purchased for the project. MDOT does not directly compensate property owners for potential losses in property values due to their proximity to potential additional value created by the project.

The City West Alternative keeps all of the existing plaza related jobs in the City of Port Huron. Existing and additional potential CBP and MDOT staff that work on the expanded plaza would be subject to Port Huron's local income tax. Workers employed at businesses required to relocate by the new plaza would still be subject to the Port Huron income tax if they live in the city or if the business relocates within the city limits. There could be local income tax revenue reductions if businesses and residents who must relocated because of the City West Alternative choose to move to other communities.

The construction and operation of the City West Alternative would substantially reduce or eliminate the estimated \$4.3 billion in trade costs due to excess congestion as discussed above for the No-Build Alternative. This will lead to increased revenue and employment for industries that rely on the border crossing to ship products and parts between the United States and Canada. Increased revenue and jobs will translate into tax benefits to the United States, Michigan, Canada, and Ontario.

*Job Impacts:* The City West Alternative will relocate the jobs that are connected with the businesses that are displaced. The job relocations for the City West Alternative are listed in **Table 3.4.3**. The alternative would displace businesses with a total estimated employment of 400 people. If some of the displaced businesses choose to shut down or move outside of the Port Huron, there would be a loss of local jobs.

The City West Alternative would benefit national employment by decreasing the cost of transporting goods across the border and increasing revenue and efficiency for firms that rely on the border crossing to ship products and parts between the United States and Canada.

The investment of construction dollars for the project will result in the creation of new jobs. When an investment is made in the construction of a new facility, the companies and individuals receiving payment for building the project will in turn spend the money they receive on other goods and services. Companies and individuals receiving benefits in terms of reduced travel time and accident costs would also invest portions of these savings in the local and state economies. Based on the estimated construction cost for the City West Alternative of \$232 million, the Study Team estimates that 4,220 jobs will be created over a five-year construction period. Most of these jobs will be short-term construction related positions. Local job benefits from construction of the Preferred City West Alternative would depend in part on the availability of local materials and workers. MDOT seeks the best possible value from its investments when tendering construction projects and, like any other project, there is no guarantee local firms would be selected or local materials used.

Trade Impacts: The City West Alternative would result in similar positive impacts on trade and commerce across the Blue Water Bridge through a reduction in travel times and congestion as the other Build Alternatives. Reduced congestion will lead to less uncertainty in border crossings, allowing firms that transport goods across the border to meet just in time delivery schedules with less warehouse inventory required. The earlier discussion of the No-Build Alternative identified the cost of excess congestion and delay between 2010 and 2030 as \$4.3 billion in 2006 dollars. All Build Alternatives will reduce congestion to a minimum by providing the facilities needed to avoid future substantial backups for the No-Build Alternative. The City West Alternative would thus result in an estimated savings to the United States and Canadian economies of more than four billion dollars during its first 20 years of operation.



**Trade and commerce would benefit under the City West Alternative**



### 3.4.7 How Would the Township Alternative Affect Businesses, Taxes, Trade, and Jobs?

The economic effects of the Township Alternative would include the relocation of local businesses and jobs, changes in access for local businesses, and changes to the local tax base for the City of Port Huron and Port Huron Township. The Township Alternative also would reduce future congestion at the Blue Water Bridge border crossing, providing positive economic benefits to trucking firms and other companies and individuals involved in cross-border trade.

*Impacts on Existing Businesses:* As discussed in greater detail in **Section 3.6 Relocations**, the Township Alternative relocates 29 businesses. Approximately 65 percent of the displaced businesses own their site while the others lease their business location. These businesses may choose to relocate to a different jurisdiction, a different part of the community, or remain close to their existing location when possible. For many of the proposed business relocations for the Township Alternative, only a small portion of the parcel is required for right-of-way. In these cases MDOT may be able to work out an agreement so that the businesses could remain in its existing location if the property owner is interested. Regardless, potential long-term business sites would remain within the City of Port Huron's designated Blue Water Gateway Business Area and the Pine Grove Avenue Mixed Use Area. The Township Alternative would relocate a substantial number of businesses that would have a short to medium term impact on the local economy.

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#### What is Pass-By Traffic?

Pass-by traffic refers to customers that do not live in the local neighborhood and area but are traveling through the area. Most of the border crossers at the Blue Water Bridge who stop at businesses in the Study Area are pass-by traffic.

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The Township Alternative would substantially change the access to existing businesses for cross-border traffic. All cross-border traffic would be inspected at the relocated plaza. As a result, businesses in the vicinity of the existing plaza and along Pine Grove Avenue would not be as accessible to cross-border travelers. Motorists whose destinations are outside the Port Huron Area are unlikely to backtrack to access the businesses in the vicinity of the existing plaza. Businesses that rely on pass-by traffic, such as gas stations and restaurants, will be bypassed by border traffic and will see a reduction in sales as a result. Similarly, businesses at the Water Street interchange would also be impacted by a



reduction in sales from cross border traffic, as motorists would have to backtrack to access them. Businesses that cater to interstate traffic located at the Range Road exit on I-94 and the Wadhams Road exit on I-69 would likely see an increase in sales, as they would now be located at the first interchanges after the border crossing. New businesses could also develop at the Range Road and Wadhams Road interchanges. Impacts at those locations are discussed further in **Section 3.7 Indirect and Cumulative Impacts**. Relocated and new businesses would likely develop on available sites in the vicinity of the existing plaza after local road improvements are made.

The Township Alternative will also impact travel times for most individuals who use the border crossing to travel between Canada and specific commercial destinations, work places, and residences in the Port Huron area. Motorists traveling to and from destinations north of the existing plaza would experience an estimated increase of 6.7 minutes in travel time in each direction compared to existing plaza conditions or the alternatives that expand the plaza in the City of Port Huron. These 6.7 minutes do not include border inspection time, which would be much higher for the No-Build than for the Build Alternatives. **Table 3.4.4** lists the estimated changes in travel times for key destinations in the Port Huron area compared to a No-Build condition. This information is also shown in **Figures 3.4.7 and 3.4.8**.

**Table 3.4.4 Estimated Change in Travel Time to Key Destinations, the Township Alternative Compared to No-Build, City East, and City West Alternatives**

<b>Location</b>	<b>No-Build/ City Alts. Distance (miles)</b>	<b>Township Distance (miles)</b>	<b>Net Change in Distance (miles)</b>	<b>No-Build/ City Alts. Estimated Travel Time (minutes)</b>	<b>Township Estimated Travel Time (minutes)</b>	<b>Net Change in Travel Time (minutes)</b>
<b>Birchwood Mall</b>	3.5	7.6	4.1	12.5	19.2	6.7
<b>Baker College</b>	2.9	4.7	1.8	5.0	8.5	3.5
<b>Port Huron Hospital</b>	2.3	6.4	4.1	7.4	14.1	6.7
<b>Mercy Hospital</b>	4.4	7.4	3.0	15.6	19.2	3.6
<b>Wadhams Road Interchange</b>	7.2	7.3	0.1	8.5	10.3	1.8
<b>Range Road Interchange</b>	6.0	6.1	0.1	7.3	9.1	1.8
* All distances and travel times are measured from the center of the Blue Water Bridge but do not include times for inspections.						

Changes in Distance to Port Huron Area Destinations

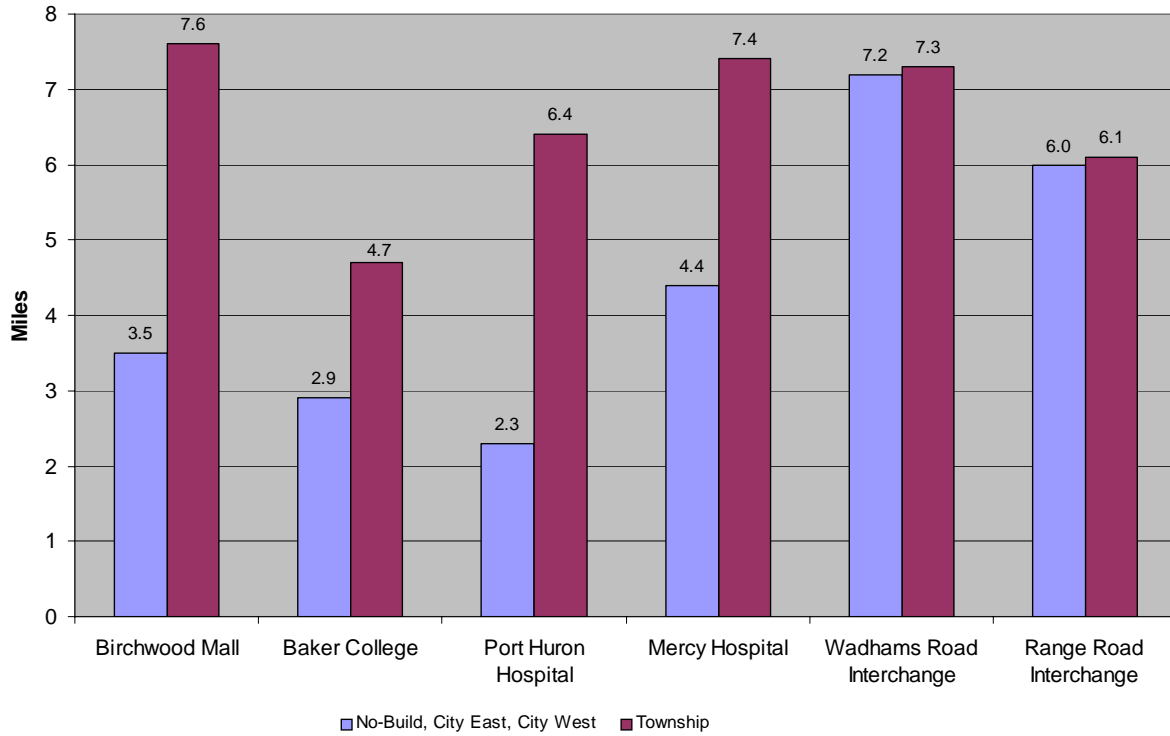


Figure 3.4.7 Changes in Distance

Changes in Travel Time to Port Huron Area Destinations

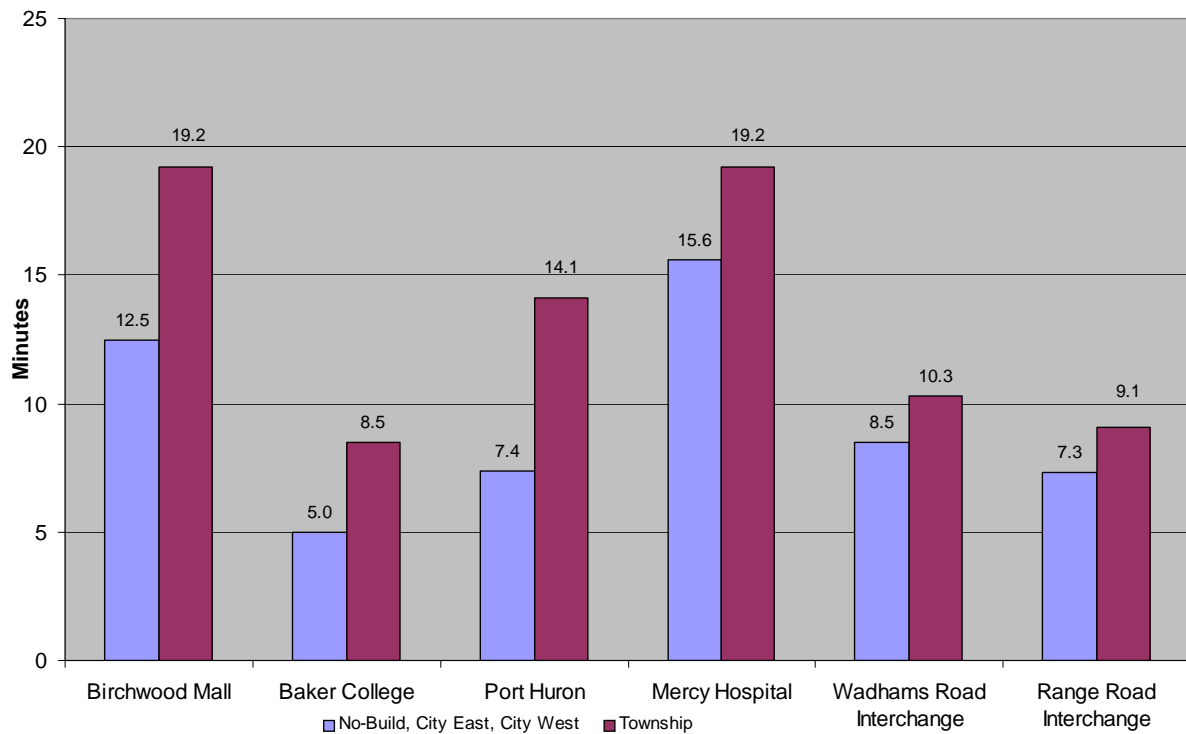


Figure 3.4.8 Changes in Travel Time



Downtown Port Huron

The Township Alternative would have minor effects on businesses in downtown Port Huron. With the Township Alternative, all border crossers would be inspected at the new plaza. There would be no exit on the existing plaza site at Pine Grove Avenue. The existing route for border crossers to reach downtown Port Huron requires multiple turns around the existing plaza. With the Township Alternative, border crossers would be able to choose between using the Lapeer Connector, Water Street, or Hancock Street and Pine Grove Avenue to access downtown. The distance traveled between the plaza and downtown will increase by approximately 1.5 to two miles depending on the route chosen. The additional distance to reach downtown could be a disincentive for border travelers to visit downtown. Downtown Port Huron is currently a destination for shopping and dining and is not well signed at the existing plaza. Better signage directing travelers to the downtown would help mitigate the effect of relocating the plaza, for businesses located in downtown Port Huron.

The Township Alternative would have minor effects on businesses in Fort Gratiot Township. The Birchwood Mall and a series of large retail stores, restaurants, and smaller malls are located along 24<sup>th</sup> Avenue, approximately three to four miles north of the existing plaza. The new plaza for the Township Alternative would be located approximately five to six miles from these businesses. The total travel distance between the border and the businesses in Fort Gratiot Township would increase by approximately four miles as border crossers would travel to the new plaza and back north to reach Fort Gratiot Township. The Birchwood Mall and the other businesses in Fort Gratiot Township are located more than three miles away from the existing plaza. Border crossers are unlikely to travel there except on a planned shopping trip. There are no signs to the mall at the existing plaza and it is highly unlikely that pass-by travelers with no knowledge of the area would head that far north for food, lodging, shopping, or gasoline. The Birchwood Mall area acts more as a retail destination for cross-border shoppers who know the Port Huron Area. These cross-border shoppers will not likely be deterred by the extra four mile drive, especially if congestion is reduced through the construction of a new plaza. There is a shopping area in Marysville, approximately six miles south of the proposed

new plaza for the Township Alternative along I-94, which could be a possible shopping destination for traffic headed south to Detroit and would likely provide minor competition to the mall for cross-border shoppers. The potential for the development of new businesses to serve plaza traffic if the Township Alternative is constructed is discussed in **Section 3.7 Indirect and Cumulative Impacts**.

*Tax Base Impacts:* **Table 3.4.2** lists the local property tax base impacts by alternative.

MDOT would not pay property taxes on the property purchased for a new plaza and other roadway improvements. The City of Port Huron would lose approximately 0.7 percent of its existing property tax base if the Township Alternative was constructed. The property tax base of the City of Port Huron grew approximately 4.4 percent annually between 2003 and 2006. The loss of tax base to the City of Port Huron would be less than one year's annual growth in taxable value. The loss of taxable value would represent a permanent loss to the City of Port Huron's revenue and thus would affect budgets and programs.

Port Huron Township would lose approximately 1.3 percent of its existing property tax base if the Township Alternative was constructed. The property tax base of Port Huron Township grew approximately 5.5 percent annually between 2003 and 2006. The loss of tax base to Port Huron Township also would be less than one year's annual growth in taxable value. The loss of taxable value would represent a permanent loss to Port Huron Township's revenue and would affect budgets and programs.

St. Clair County and the Port Huron Area School District would also lose tax base and tax revenue as a result of the Township Alternative. These jurisdictions have larger tax bases than the City of Port Huron and Port Huron Township and the resulting losses to their tax bases would be much lower on a percentage basis.

If the Township Alternative is constructed, the homeowners that remain in the vicinity of the new plaza, in Port Huron Township, may experience changes in their property values



Homeowners who remain in the new plaza area may experience tax changes

and property taxes. Home and business owners located near the existing plaza also may experience changes in their property values and taxes. It is very difficult to isolate the effect of transportation improvements on the value of particular parcels of lands. Some parcels may increase in value due to improved access while other properties may lose value due to noise or visual impacts. A property, which may have lower value as a residential property, may also have a much greater value as a potential business site. It is also difficult to differentiate between the effects of the project and changes in values due to property improvements or changes in the local market. As a result, MDOT does not attempt to assess the changes in value for individual properties that do not need to be purchased for the project. MDOT does not directly compensate property owners for potential losses in property values due to their proximity to the project nor does MDOT charge property owners for any potential additional value created by the project.

The City of Port Huron collects a local income tax from plaza workers. The Township Alternative would relocate approximately 485 plaza related jobs to Port Huron Township. The plaza employees who would relocate to the new plaza and who do not live in the City of Port Huron would no longer pay income tax to the City of Port Huron. Workers employed at businesses relocated by the new plaza would still be subject to the Port Huron income tax if they live in the City or if the business relocates within the City limits. There could also be local income tax revenue reductions if businesses and residents who must relocate because of the Township Alternative choose to move to other communities.

The construction and operation of the Township Alternative would substantially reduce or eliminate the estimated \$4.3 billion in trade losses due to excess congestion discussed above for the No-Build Alternative. This will lead to an increase in revenue and employment for those involved in the transportation of goods and for industries that rely on the border crossing to ship products and parts between the United States and Canada. Increased revenue and jobs will translate into tax benefits of the United States, Michigan, Canada, and Ontario.

*Job Impacts:* The Township Alternative will impact jobs through the relocation of jobs that are connected with businesses to be displaced. **Table 3.4.3** lists the potential job relocations for the Township Alternative as well as the other alternatives.

The Township Alternative would displace businesses with a total estimated employment of 395 people. If some of the displaced businesses chose to shut down or move outside of the Port Huron area, there would be a loss of additional local jobs. As discussed above, the Township Alternative would also move the jobs on the existing plaza from the City of Port Huron to Port Huron Township. The Township Alternative would benefit national employment by decreasing the cost of transporting goods across the border and increasing revenue and efficiency for firms that rely on the border crossing to ship products and parts between the United States and Canada.

Based on the estimated construction cost for the Township Alternative of \$244 million, the Study Team estimates that 4,440 jobs will be created over a five-year construction period. Most of these jobs will be short-term construction related positions. Local job benefits from construction of the Township Alternative would depend in part on the availability of local materials and workers. MDOT seeks the best possible value from its investments when tendering construction projects and, like any other project, there is no guarantee local firms would be selected or local materials used.

*Trade Impacts:* The Township Alternative would also result in positive impacts on trade and commerce across the Blue Water Bridge through a reduction in travel times and congestion. Reduced congestion will lead to less uncertainty in border crossings, allowing firms that transport goods across the border to meet just in time delivery schedules with less warehouse inventory required. The earlier discussion of the No-Build Alternative identified the cost of excess congestion and delay between 2010 and 2030 as \$4.3 billion in 2006 dollars. All Build Alternatives will reduce congestion by providing the facilities needed to avoid the future substantial backups for the No-Build Alternative. The Township Alternative would thus result in an estimated savings to the



United States and Canadian economies of more than \$4 billion between 2010 and 2030 in the same manner as the other Build Alternatives.

#### 3.4.8 What are the Border Crossing Economic Impacts on Traffic?

Economic factors such as trade, economic growth, jobs, changes in certain industries, exchange rates and tourism will play a substantial role in determining future traffic growth at the Blue Water Bridge. There is no one single economic factor that determined past traffic growth trends. Future traffic growth at the Blue Water Bridge will depend on the complex interrelationship of a wide variety of economic and other factors. The growth of truck traffic will depend on different economic factors than the growth of passenger car traffic. Truck traffic growth will depend more heavily on international trade patterns and the state of the economies across the Midwest and Western United States, Ontario and even Mexico. Passenger vehicle volumes will depend more on the exchange rates, job prospects and discrete trip attractions in southeast Michigan and adjoining states. The following paragraphs discuss some of the economic factors that will affect future traffic volumes at the Blue Water Bridge. A key part of this economic analysis is that the Blue Water Bridge is not like many border crossings in that it serves far more than just a local or regional market. Future traffic growth at the Blue Water Bridge will depend much more on economic conditions across most of the United States and Canada/Ontario than it will on local or regional economic growth.



Economic factors will help determine future traffic growth, at the Blue Water Bridge

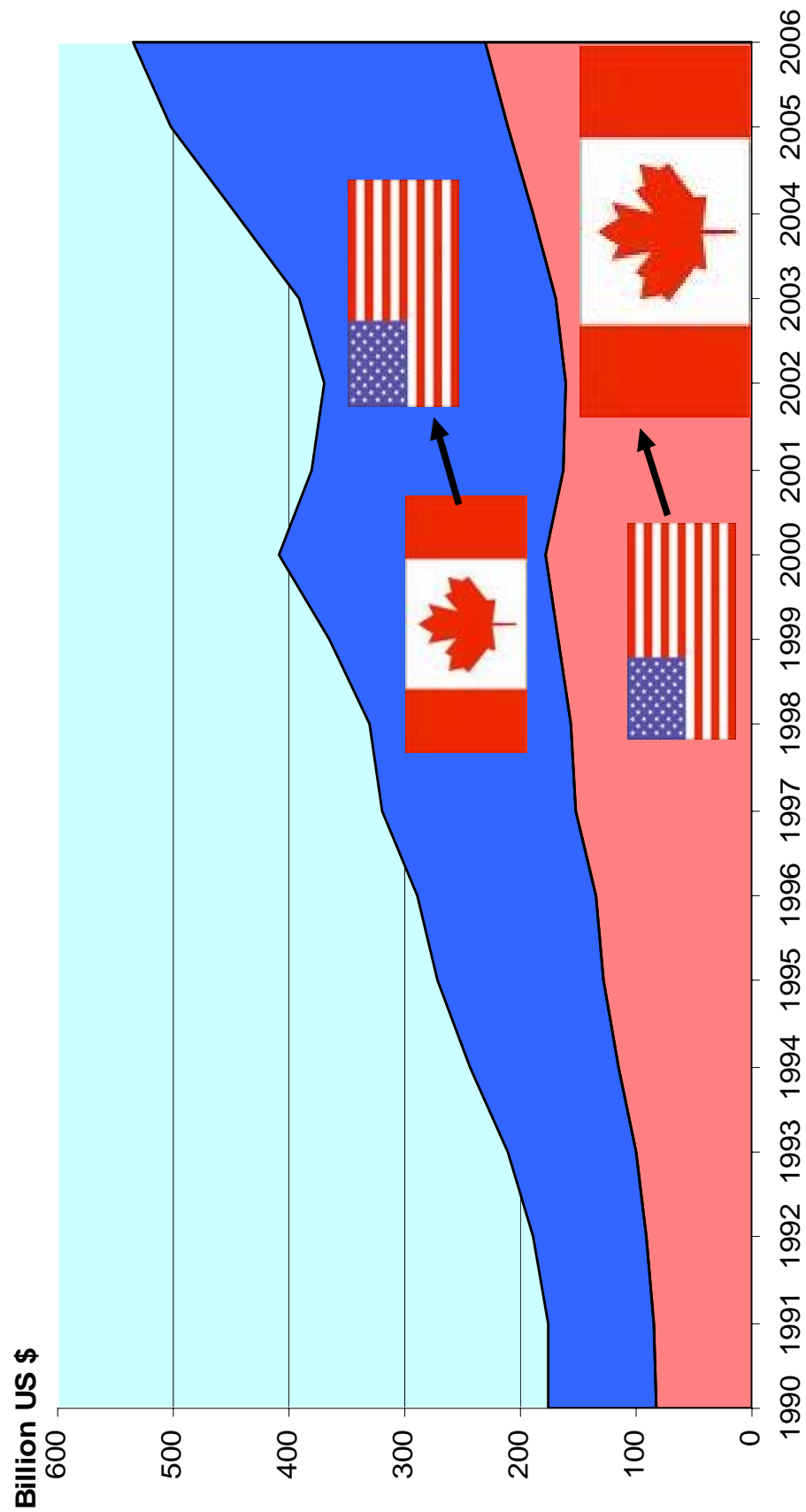
International Trade: The world's largest bilateral trade relationship exists between the United States and Canada. Goods and people moving across the border substantially impact the economies of Michigan, Ontario, the United States, and Canada. The United State's trade with Canada averages more than \$1.2 billion per day. **Figure 3.4.9** shows the growth in total trade between the United States and Canada since 1990. In 2005, surface transportation trade between the United States and Canada totaled \$458 billion. Over the past 30 years, United States/Canada trade has grown faster than the rate of growth of Gross Domestic Product (GDP), at an annual rate of

11 percent per year. Michigan is by far the largest United States trading partner with Canada with nearly \$72 billion in goods traded in 2005. Two thirds of United States-Canada trade moves by truck. (United States Census Bureau and Bureau of Transportation Statistics Data, 2006).

The growth in trade was first boosted by the United States-Canada Free Trade Agreement that took effect in 1989. This treaty was superseded by the North American Free Trade Agreement in 1994, which now includes Mexico. These trade agreements abolished or reduced tariffs on exports between the countries. The Blue Water Bridge border crossing has been affected by these trade agreements as much as any border crossing on the northern border.

These trade agreements are likely the largest factor behind the growth in truck traffic since 1990. The terrorist attacks of September 11, 2001 have caused a decline in truck traffic and traffic in general at some border crossings. So has the recent downturn in the auto industry and the Michigan economy in general. However, truck traffic at the Blue Water Bridge has continued to grow. This is due to the importance of the border crossing to overall North American trade.

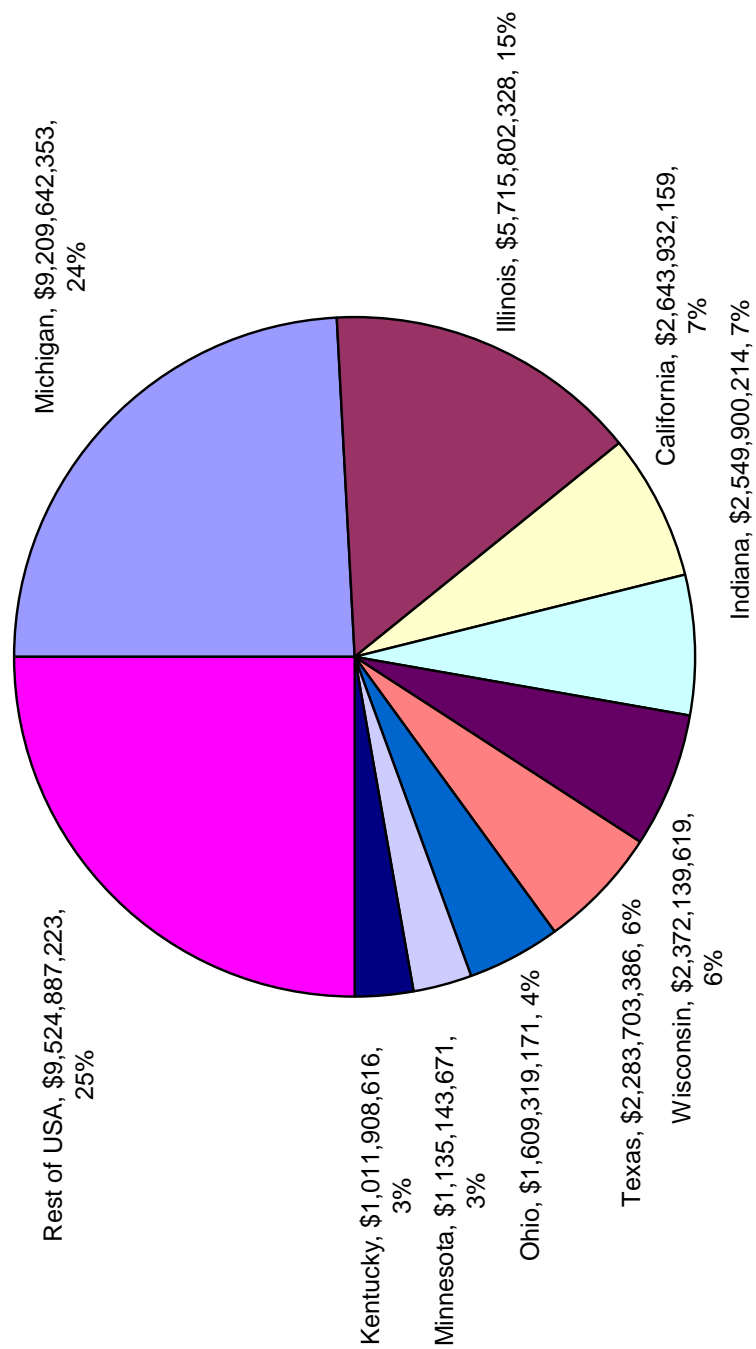
There are nine states that were the origin or destination for at least \$1 billion worth of goods that crossed the border by truck in Port Huron in 2005. These are shown in **Figure 3.4.10** along with the percentage of the total value of truck shipments crossing at Port Huron. Michigan had the highest share of shipments of any state but only approximately 24 percent of the total. Approximately 76 percent of all goods (by value) that crossed the border by truck at Port Huron either came



U.S. To Canada Exports and Imports

Figure 3.4.9

**Value of Border Trade by Trucks Crossing at Port Huron by Origin/Destination  
(States with over \$1 Billion in Trade Value, 2005)**



Source: Bureau of Transportation Statistics Transborder Freight Data, 2007

Figure 3.4.10

from or went to states outside Michigan. Illinois had the second highest total followed by California, Indiana, and Wisconsin (Bureau of Transportation Statistics Transborder Freight Data, 2007). In evaluating future truck traffic growth, it is important to consider the likely economic growth throughout the Midwest and Western United States and Eastern Canada. This includes consideration of further transportation developments that may enhance the Blue Water Bridge's position as a key destination for North American Trade. One example would be the proposed I-69 freeway that starts at the Blue Water Bridge. Currently I-69 ends in Indianapolis, Indiana but there are plans in various stages of development to make I-69 a north-south NAFTA highway stretching from the Blue Water Bridge to the Mexican border in Texas.

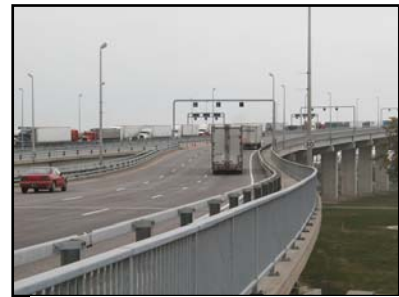
Trade between the United States and Canada has not shown any long-term signs of decreasing, although there are occasional years of decline such as 2001 and 2002 based on economic cycles and unforeseen events such as the terrorist attacks. Between 2000 and 2005, total trade value between the United States and Canada increased by 25.5 percent. Trade by truck increased by 14.5 percent between 2000 and 2005 (Bureau of Transportation Statistics Transborder Freight Data, 2007). The truck traffic forecasts for the Blue Water Bridge reflect a continued expectation of trade growth between the United States and Canada. On a national level, freight volumes are growing much faster than the United States population or even the United States Gross National Product. As the economy grows, so does the volume of goods shipped. Despite declines in manufacturing employment, manufacturing output continues to grow. American manufacturing is increasingly relying on high end, high value products to differentiate itself from growing foreign manufacturers who focus on high volume. As output grows, so does the demand for freight services.

The value of international trade is forecast to grow from the equivalent of 13 percent of the United States economy in 1990 to 35 percent in 2020 and 60 percent by 2035. (AASHTO, America's Freight Challenge, May 2007).

Michigan Economy: Michigan's economy is facing unprecedented challenges and probable structural changes. Michigan's auto manufacturing industry has been undergoing a substantial transition with major buyouts and layoffs at the Big Three auto companies. Michigan's economy has grown more slowly than the rest of the nation for 11 consecutive years. Over this time period, the Gross State Product (GSP) has increased an average of 1.7 percent per year, approximately half of the growth rate for the national economy. This has had an impact in terms of lower growth in incomes and employment.

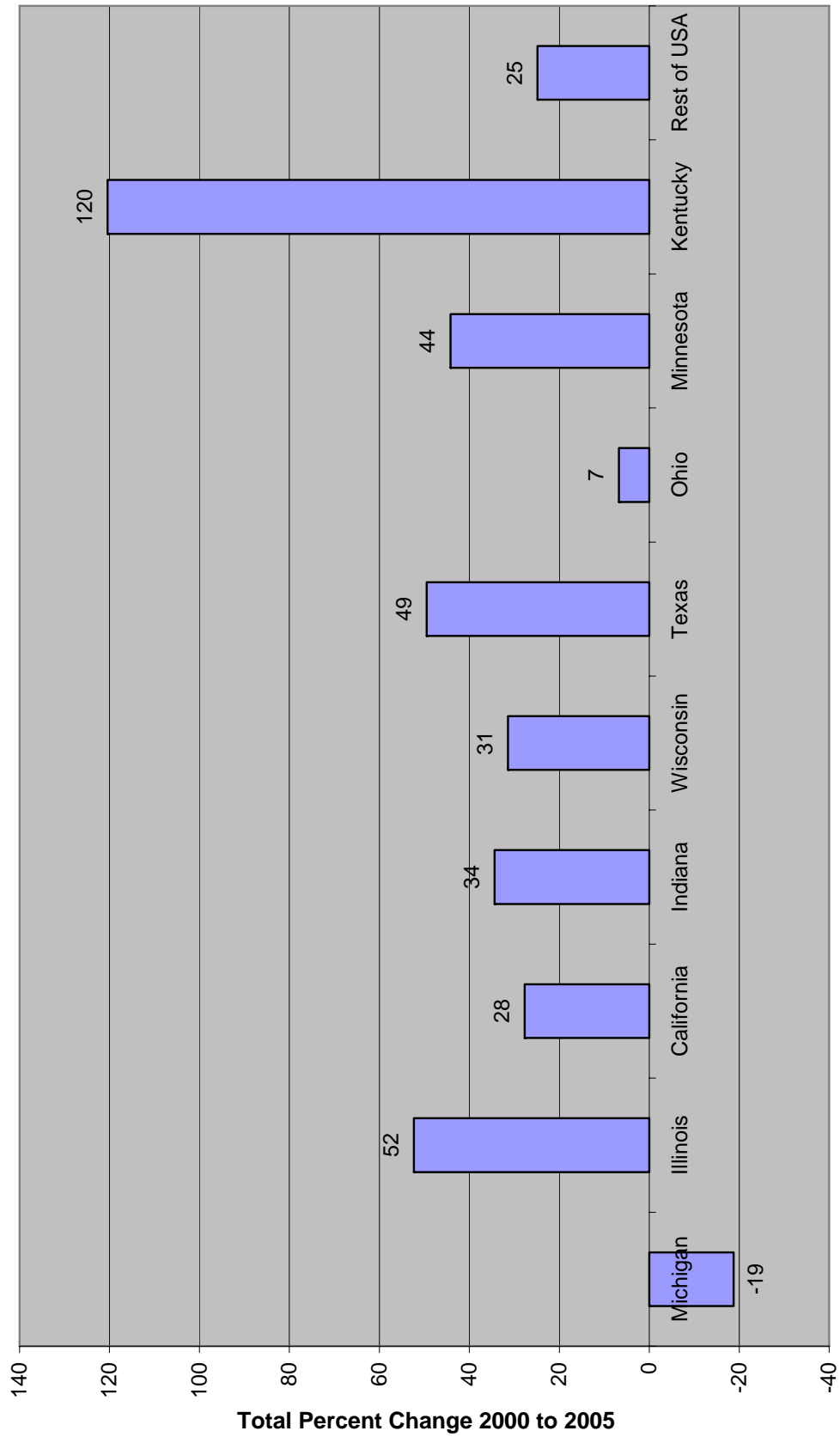
The effects of Michigan's economic growth are only one of a number of factors affecting the growth in truck traffic at the Blue Water Bridge. **Figure 3.4.11** shows the growth rate for the values of truck shipments crossing the border at Port Huron for the same key states identified above. Between 2000 and 2005, the value of trade crossing at Port Huron has increased substantially for most of the states except Michigan, which has experienced a decline. This shows that it is trade growth from other states that is causing recent increased traffic at Port Huron. The economic slow down in Michigan has tempered but not eliminated the growth in truck traffic at the Blue Water Bridge. Additionally, overall trade between Michigan and Canada has actually increased by five percent between 2000 and 2005 indicating a shift of Michigan shipments away from the Blue Water Bridge to other crossings or other modes of transportation.

In the near-term Michigan is expected to exhibit weak growth with continued higher unemployment rates. How long the period of weak growth lasts will likely depend on the time required for Michigan-based auto manufacturers to stabilize their business and reposition themselves in the global marketplace and the diversification of the economy to other industry sectors.



Trade growth is causing increased traffic at Port Huron

**Percent Change in Border Trade by Truck at Port Huron by Origin/Destination - 2000 to 2005)**  
**(States with over \$1 Billion in Trade Value)**



**Figure 3.4.11**

United States Economy: As discussed above, the overall health and growth of the United States (and Canadian) economy and its impact on trade will likely be a greater factor in determining future traffic levels at the Blue Water Bridge than the local, regional, or Michigan economy. Truck growth at the Blue Water Bridge has weathered Michigan's economic downturn and continued growth is expected based on national and international trade trends.

Since November 2001, the United States economy has been steadily recovering from the slide it took when the technology bubble burst. Despite the increasing pressure from inflation, as evidenced by high oil prices and rising interest rates, the United States economy has demonstrated resilient growth in recent years. Unemployment has steadily dropped since the third quarter of 2003, although manufacturing jobs have continued to decline.

In the near-term, the United States economy is expected to grow. Based on the forecast released by the Congressional Budget Office (CBO), real GDP is expected to grow between 2.3 and 3.1 percent annually between 2007 and 2009 and unemployment to remain at 5 percent or less. Long-term there will likely be cyclical periods of short-term slowdown or decline for the United States economy. The CBO forecasts that real GDP growth will average 2.9 percent annually between 2009 and 2012 and 2.5 percent annually between 2013 and 2017 (Congressional Budget Office Director, The Budget and Economic Outlook: Fiscal Years 2008 to 2017, 2007). Some of the current economic concerns include rising budget and trade deficits, high oil prices, unstable supplies of resources from foreign countries, and an uncertain housing market resulting in increased foreclosures.

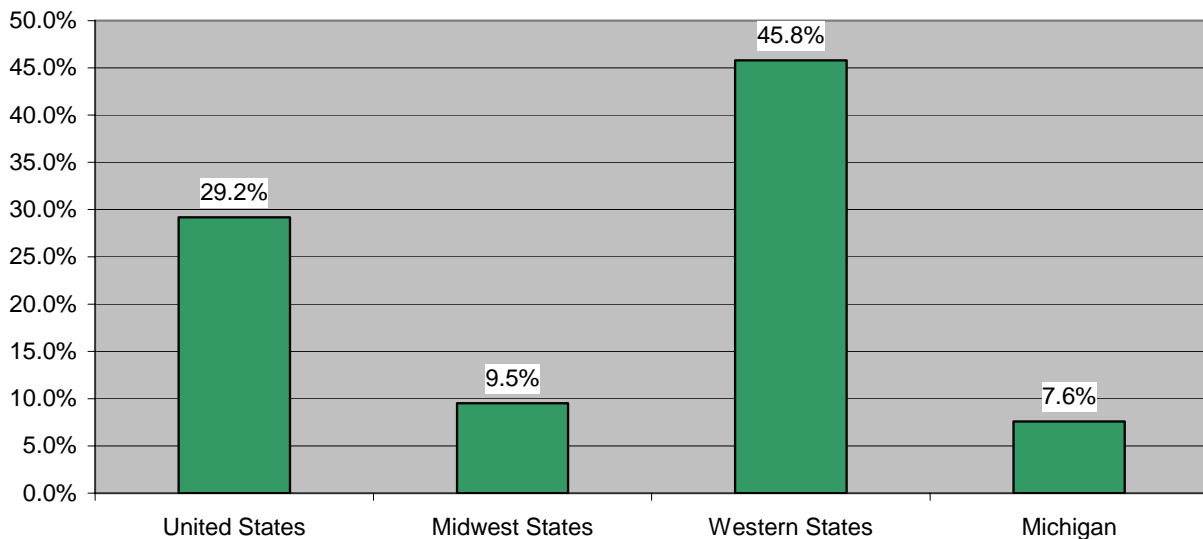
Population growth is likely the single largest determinant of overall economic growth in the United States that will cause greater demand for products and trade. As shown in **Figure 3.4.12**, the United States population is expected to grow by 29.2 percent between 2000 and 2030 to a total of approximately 364 Million. The Midwest is expected to grow by 9.5 percent and the West is expected to grow by 45.8 percent between 2000



and 2030. Michigan is forecast to grow by 7.6 percent between 2000 and 2030 (United States Census Bureau Forecasts, 2005).

The traffic forecasts for the Blue Water Bridge assume that the United States economy will continue to grow in the long-term and will continue to support trade growth. Previous cyclical

**Forecast United States Population Growth  
Affecting Blue Water Bridge Crossings  
(2000 to 2030)**



**Figure 3.4.12**

declines in the United States economy have dampened but not eliminated truck traffic growth at the Blue Water Bridge.

Canadian/Ontario Economy: The Canadian economy and specifically economic conditions in Ontario also have substantial effects on traffic growth at the Blue Water Bridge. Ontario origin/destination shipments represent approximately 89 percent of the truck shipments by value crossing at Port Huron.

According to the Ontario Ministry of Finance Long-Term Outlook, Ontario's population is forecast to grow by nearly 25 percent between 2005 to 2025 to approximately 15.7 million. Ontario's GDP is forecast to grow between 2.3 and 3.0 percent per year over the same time period and the unemployment rate is expected to slowly decline (Ontario Ministry of Finance, Towards 2025: Assessing Ontario's Long-Term Outlook).

This population and economic growth in Ontario should translate into continued traffic growth, especially commercial traffic growth at the Blue Water Bridge. Growth in Southwestern Ontario is expected to be slower than for Ontario as a whole. This would potentially translate into lower but positive long-term passenger vehicle traffic growth at the Blue Water Bridge as passenger traffic volumes are more dependent on regional growth.

Local/Regional Economy: Economic growth is substantially slower for Southeast Michigan including Port Huron and St. Clair County. The Economic and Demographic Outlook for Southeast Michigan Through 2035 published by SEMCOG (March 2007) shows continued slow population and economic growth for the region as a whole. The recent trends for the region have included lost jobs, struggles for the automotive industry, and mixed population change including decline in older communities. SEMCOG forecasts a total increase in employment of 7.1 percent between 2005 and 2035 and a 3.4 percent increase in population over the same time period. SEMCOG readily acknowledges there are different potential growth scenarios depending on if and how well the automotive industry rebounds and how well the economy diversifies into other industries such as knowledge based industries.

The impact of a slow growing or stagnant regional economy on the future traffic forecasts for the Blue Water Bridge is mixed. As discussed above, truck shipments for the Blue Water Bridge are more dependent on national and international trade trends than on regional economic growth. As a result, there should only be a minimal drag on truck traffic growth from a poorer performing regional economy. The effect would be larger for passenger vehicle traffic although there is still forecast growth in both population and the economy for Southeast Michigan and for Southwestern Ontario. This alone suggests that at some point the recent downward trend of passenger vehicle crossings at the Blue Water Bridge should reverse itself.

Modal and Freight Trends: Nearly every product consumed in the U.S. at some point is transported upon a truck. The trucking industry plays a key role in today's globally



**Trucking employs more than  
eight million people  
nationwide**

integrated economy, employing 8.6 million people nationwide. Nationally, trucking accounts for 69 percent of freight movements by weight and 87 percent by value. Michigan closely mirrors the national modal split profile with 70.5 percent of freight tonnage moving by truck and 86 percent by value. Trucking accounted for nearly 474 million tons of commodity movements in, out, within, and through Michigan in 2003, with an estimated value exceeding \$1 trillion.

Goods must move along complex supply chains that originate with raw commodities, move the various value-added manufacturing processes, ultimately to warehouses and stores and to the doorstep of the American consumer. A significant portion of America's productivity gains in recent years have come from logistics. The need for high-value, time sensitive shipments has grown geometrically. American producers and consumers now demand a precisely tuned and reliable network to provide what they want, when they want it (AASHTO, America's Freight Challenge, May 2007).

The traffic forecasts for the Blue Water Bridge assume that this modal pattern is not going to substantially change and that there is not going to be a widespread movement of freight to other modes, reducing the use of this border crossing. **Figure 3.4.13** which illustrates anticipated national trends in modal choice for freight movements supports the conclusion that truck traffic will continue to be the dominant mode. The rising price of gas coupled with future enhancements to rail technology that improve its flexibility for just-in-time delivery and local business delivery could cause a future change in modal patterns. Because of the amount of long-haul trade traffic crossing the Blue Water Bridge, this crossing has a higher potential from the effects of a switch to other modes of freight movement such as rail. However, there is not an evident trend to suggest that such a modal switch is occurring. There are also limits on capacity for rail freight movements on the Michigan/Ontario border as well as in Chicago and other key points throughout the country. Rail shipments also require inspections in the same manner as truck shipments.

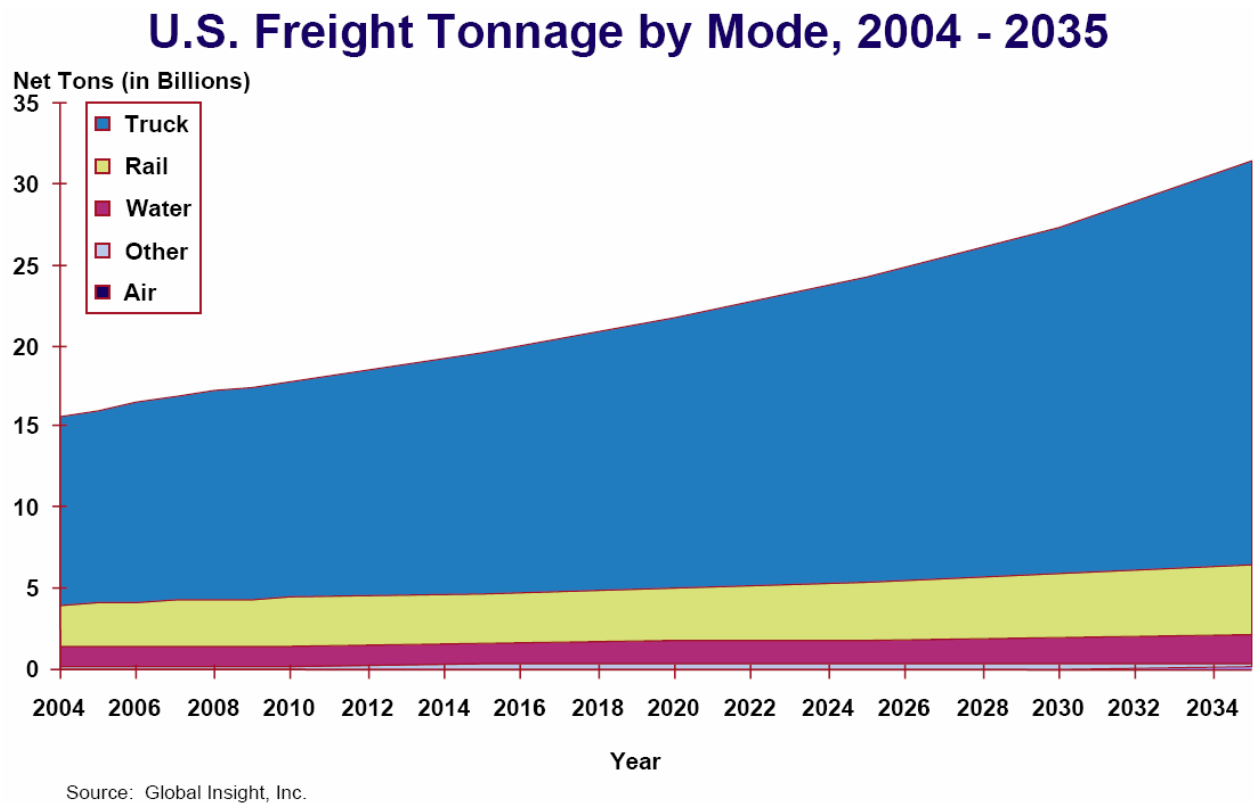


Figure 3.4.13

Exchange Rates: The exchange rate between the United States dollar and the Canadian dollar could have variable and mixed effects on the growth of traffic at the Blue Water Bridge. A period of high value for the Canadian dollar could lead to increased cross border shopping by Canadians in stores in the United States. This was clearly seen during the early to mid 1990s when passenger traffic levels peaked at the northern border crossings. The Canadian dollar declined substantially from the mid-1990s through the early part of the 2000s. This may have contributed to the decline of passenger vehicle crossings at the Blue Water Bridge, coupled with other factors such as a reduction in newly developed stores or malls in the area. There was no evident reverse trend of widespread shoppers from the United States heading to Canada to take advantage of the low Canadian dollar. The Canadian dollar has been relatively high in value again over the past two years and has reached a 30-year high in the past month (May 2007). This has not evidently resulted in a substantial increase in passenger vehicle crossings.

If the Canadian dollar remains high for a long period of time, it could have a negative effect on Canadian exports by making them more expensive relative to products in the United States. This has been a recent issue of concern to Canadian manufacturers. A long-term trend of higher costs for Canadian exports could reduce traffic across the Blue Water Bridge. This is currently a short-term developing condition whose long-term impact is uncertain.

Tourism: Travel for tourism purposes is a large contributor to cross-border passenger traffic at the Blue Water Bridge. Short-term tourism would include crossings to play at the casino in Sarnia, to play casinos within the United States, for entertainment or dining purposes in the Sarnia/Port Huron area, or for shopping opportunities as discussed above. There are also longer distance tourism related trips to a large number of destinations in either the United States or Canada.

Forecasting tourism growth or decline and its effects on passenger vehicle traffic at the Blue Water Bridge is very difficult. Population and economic growth are the leading factors that indicate tourism will increase to some extent over time. However, new passport requirements, gasoline costs, exchange rates, and the availability of new attractions will all factor into changes in tourism based trips.

Catastrophic Events: Short-term and long-term catastrophic events could always affect the economic factors that determine traffic growth at the Blue Water Bridge. The changes in border policy following the attacks of September 11, 2001 had a substantial short-term impact (virtual border closure) and a long-term impact in terms of new inspection requirements. There appears to have been a greater impact on passenger vehicle/tourism related traffic than on trade and commercial traffic. A health epidemic such as the SARS concerns in the Toronto area from 2003 could also have a substantial short-term impact. Some sort of catastrophic events of these types are likely to happen and affect traffic levels for a short-term period, potentially measured in years. But unless they result in the termination of trade agreements, closure of the border, or other extreme measures, long-term trends for trade and economic growth should be more dominant. To forecast lower

traffic levels in anticipation of one or more of these events is unlikely to be prudent in the long-term.

Conclusions: Three major conclusions can be derived from the examination of the economic factors that will determine future traffic levels at the Blue Water Bridge. These formed the development of border crossing forecasts for the Blue Water Bridge Plaza Study.

- 1) There are many different economic factors to consider and an attempt to isolate the anticipated future growth to one or a few specific measurable factors is very difficult. In addition, many of the key economic factors such as GDP growth are very difficult to predict in the long-term with any certainty.
- 2) Because of the markets it serves, national economic trends in the United States and international economic trends in Ontario/Canada and Mexico will be more significant determinants of traffic growth at the Blue Water Bridge than Michigan, Southeast Michigan, or local forecasts.
- 3) Long-term growth in terms of population, employment, GDP, and trade are expected for the United States and for Ontario/Canada. These growth trends suggest there will not be a substantial decline in the growth of truck traffic due to trade and that passenger vehicle volumes are going to rebound at some point in the future. The traffic forecasts are based on these assumptions and that trucks will continue to play a significant role in moving goods across the border.

### 3.5 Public Safety and Security

This section discusses the current fire, law enforcement, emergency medical, and plaza security services for the Blue Water Bridge Plaza Study Area, and examines the affect of the alternatives, on the delivery of these services.

Methodology: Information and data included in this section was obtained by holding several task force and agency meetings, discussing relevant issues with public safety officials, and reviewing protection and security design standards in use by the United States government.

A Security and Emergency Management Task Force was formed to provide input on the alternatives. The Task Force includes representatives from the following agencies and organizations:

- City of Port Huron Police, Fire, and Engineering Departments
- Tri-Hospital EMS Corporation
- Port Huron Township Fire Department
- St. Clair County Office of Emergency Management
- St. Clair County Metropolitan Planning Commission
- St. Clair County Sheriff Department
- Michigan State Police
- Customs and Border Protection (CBP)
- General Services Administration (GSA)
- Federal Highway Administration (FHWA)
- Michigan Department of Transportation (MDOT)
- Federal Motor Carrier Safety Administration

On September 1, 2005, the Security and Emergency Management Task Force met to review the alternatives, and discuss the effects on public safety and security. The alternatives were reviewed from the perspective of providing service to and from the plaza, on the plaza, and in the vicinity of the plaza. To clarify emergency management and plaza security issues, additional meetings were held with CBP, and City, Township, and State public safety officials on October 24 and 25, 2005. **Section 3.5.2** discusses the recommended design considerations presented at the above referenced meetings.



Ambulance on Pine Grove Avenue

### 3.5.1 What are the Current Plaza Security Features and Emergency Services Provided?

Existing Agreements: As owners of the plaza, MDOT has an agreement with the City of Port Huron to provide first responder police, fire, ambulance, and other related emergency services for the plaza and bridge.

There is also a reciprocal agreement between MDOT and Canadian officials to provide back-up emergency services, as needed.



Port Huron Fire Department on Sanborn Street

Existing Conditions: Emergency management service providers access the plaza from the Pine Grove Avenue ramp, on the north side of the plaza, or from the I-94/I-69 approach to the plaza, from the west. **Figure E.2** located in the separate **Appendix E** volume shows the existing plaza, I-94/I-69 roadways, and local access ramp from Pine Grove Avenue. In the event of an emergency on the plaza, the Port Huron Fire Department dispatches equipment and personnel from the station nearest the plaza, located at 1914 Sanborn Street, or from the central station at 515 River Street. The Sanborn Street station (shown as Fire Station 1 on **Figure E.22** located in the separate **Appendix E** volume) is approximately one mile northwest of the plaza. The central station (shown as Fire Station 2 on **Figure E.22**) is approximately two miles south of the plaza.

The Port Huron Police Department has divided the city into patrol areas that are patrolled in 12 hour shifts. The night shift typically has eight to nine patrol units and the day shift four to five patrol units. The patrol unit nearest the plaza typically responds to an emergency on the plaza.

Tri-Hospital EMS provides ambulance service to the plaza. In case of an emergency, an ambulance is sent to the plaza from the EMS facility at 309 Grand River, two miles south of the plaza. Ambulances transport patients to Port Huron Hospital, one mile south of the plaza.

If there is an emergency along the I-94/I-69 corridor west of the Black River, the Port Huron Township Fire Department and St. Clair County Sheriff's Office are first to respond.



Emergency calls are received by the St. Clair County Sheriff's Dispatcher and routed to the appropriate emergency service providers in the Township or County. The Township Fire Department (shown as Fire Station 3 on **Figure E.22**) will dispatch equipment and personnel from their station located at 3848 Lapeer Road.

The Sheriff's Office provides law enforcement in Port Huron Township. There are four patrol units assigned to the Township. Typically, the patrol unit closest to an incident will respond. The Michigan State Police provides back-up to the Sheriff's Office as needed.

Canadian emergency service providers in Sarnia provide back-up for emergencies on the plaza or bridge. Sarnia Fire Rescue Services have five stations in the City of Sarnia. The closest stations to the plaza are located at 1133 Colborne Road and 240 E Street North, three and four miles from the plaza, respectively.

CBP provides border security and prevents unauthorized entry of goods or persons into the United States. CBP is responsible for the security of the plaza infrastructure and notifies the city dispatcher in case of an emergency.

The existing plaza is elevated 24-feet above ground providing inherent security to the plaza operations. Existing plaza security features include a three-foot high concrete barrier topped with a one-foot high cast aluminum railing along the perimeter of the elevated portion of the plaza, a seven-foot chain link fence on top of a three-foot high concrete barrier in the elevated secondary inspection area, a five-foot high chain link fence on the approach ramp from Pine Grove Avenue, and a six-foot high chain link fence along the perimeter of the at-grade portions of the secondary inspection area.

*Annual Plaza Incidents and Average Response Times:* The City of Port Huron Fire and Police Departments and the Tri-Hospital EMS Corporation were contacted to determine the frequency and time of response to emergency incidents on the existing plaza. Estimated response times are based on dispatching equipment and personnel from the location nearest the plaza.



Port Huron Township Fire Station



Elevated Plaza



Plaza Wall along Elevated Portion of Plaza

Table 3.5.1 shows the results for the specific emergency service providers.

**Table 3.5.1 Historical Rates for Plaza Incidents and Response Times**

	Average Number of Responses/Year (2003-2005)	Estimated Avg. Response Time (minutes)
Fire	25	2
Police	174	3
EMS (ambulance)	15	5

### 3.5.2 General Design Considerations and Criteria

*General Design Considerations:* Security and emergency service design elements that are part of the alternatives center on three main issues: 1) the prevention of unauthorized entry of goods and persons into the United States, 2) traffic safety, and, 3) the ability of the emergency service providers to assist and respond to incidents on the plaza/bridge and related roadway corridor.

Potential security threats to the border crossing include, but are not limited to:

- Vehicular crashes
- Emergency medical incidents
- Hazardous/Flammable material spills
- Breach of the perimeter at the plaza or corridor
- Criminal or terrorist attack at the plaza, or attempted entry by an individual with hostile intent

*Stakeholder Input on the Design Considerations:* The Security and Emergency Management Task Force provided several design recommendations at the September 1, 2005 meeting with the Study Team. These recommendations are listed below, by alternative. The Preferred Alternative (City West Alternative) was not under consideration at that time, and therefore, no design recommendations specific to the Preferred Alternative were made by the Task Force; however, design recommendations for the City East Alternative will also be considered for the Preferred Alternative.

### **City East Alternative**

- Provide a controlled gate access on the north side of the proposed plaza
- Improve the internal access to all areas of the plaza
- Provide a dedicated emergency access lane along the plaza entrance road off of Pine Grove Avenue
- Consider upgrading Stone Street and Gratiot Avenue to improve north-south traffic flow in the area
- Consider locating a first-responder station at or adjacent to the proposed plaza

CBP also recommended the following security measures:

- Provide an eight-foot high perimeter barrier that would effectively keep people and vehicles out of the secure plaza area
- Locate facilities to allow visual observation of traffic and pedestrian movements on the plaza

### **City West (Preferred) Alternative**

- Provide a controlled gate access on the north side of the proposed plaza
- Improve the internal access to all areas of the plaza
- Provide a dedicated emergency access lane along the plaza entrance road off of Pine Grove Avenue
- Consider upgrading Stone Street and Gratiot Avenue to improve north-south traffic flow in the area
- Consider locating a first-responder station at or adjacent to the proposed plaza

CBP also recommended the following security measures:

- Provide an eight-foot high perimeter barrier that would effectively keep people and vehicles out of the secure plaza area
- Locate facilities to allow visual observation of traffic and pedestrian movements on the plaza

### **Township Alternative**

- Provide access to the plaza from the local street system, north and south of the plaza
- Provide a dedicated emergency access lane within the secured corridor
- Allow for additional emergency access points along the secured corridor in addition to access at both ends
- Consider locating a first-responder station at or adjacent to the proposed plaza

CBP also recommended the following security measures:

- Provide an eight-foot high perimeter barrier that would effectively keep people and vehicles out of the secure plaza area
- Locate facilities to allow visual observation of traffic and pedestrian movements on the plaza
- Provide a buffer zone between the roadway and the perimeter barrier, within the secure corridor, to monitor activity
- The secure corridor should have a 20-foot high opaque barrier on either side of the corridor. This barrier should be topped with a four-foot long cantilevered, non-climbable fence set inward at a 45-degree angle. This barrier should be capable of withstanding an explosion that would compromise the integrity of the barrier.
- Provide a buffer area and fence between the local roadway system and the secure corridor to deter outside access and enhance visual surveillance
- Provide pole-mounted cameras to monitor either side of the perimeter barrier along the secure corridor
- Outbound and inbound traffic lanes should be securely separated
- Allow for public access to the secure corridor only from controlled points at either end of the corridor, including emergency service providers

Security and Emergency Management Design Criteria: All potential incidents on the plaza cannot be prevented; however, design elements can be incorporated in plaza improvements that would 1) make incidents less likely, 2) reduce the

potential effects of an incident, and 3) enable a more effective response to an incident.

The design criteria are based on the review of threat assessments conducted for the Blue Water Bridge Plaza, an analysis of their applicability to the proposed Build Alternatives, the review of federal design guidelines for ports-of-entry, the research of other border crossings in the United States that are similar in design, and design considerations provided by the Security and Emergency Management Task Force and CBP.

General design criteria include the following:

1. Twenty-foot high perimeter barriers would be used along the secure corridor of the Township Alternative. Eight-foot high perimeter barriers would be used around plaza areas.
2. A 20-foot high perimeter barrier would have the following characteristics:
  - a. Fabricated of anti-climb material.
  - b. Made of solid (e.g. concrete panel wall) or close mesh material with less than  $\frac{3}{4}$ -inch mesh openings to prevent objects from being passed through the barrier and that resists cutting with bolt or wire cutters.
  - c. Opaque or semi-opaque in the case of close mesh material.
  - d. Protected from vehicle or other impacts that might damage or destroy it.
  - e. Topped with a four-foot long cantilevered, non-climbable fence slanted inward at a 45 degree angle toward the secure corridor.
3. An eight-foot high perimeter barrier would have the following characteristics:
  - a. Fabricated of anti-climb material.
  - b. Made of solid (e.g. concrete panel wall) or close mesh material with less than  $\frac{3}{4}$ -inch mesh openings to prevent objects from being passed through the barrier and that resists cutting with bolt or wire cutters.

- c. Opaque or semi-opaque in the case of close mesh material.
  - d. Protected from vehicle or other impacts that might damage or destroy it.
- 4. For the Township Alternative there should be a buffer area on either side of a perimeter barrier along the secure corridor that includes a concrete median barrier located at the edge of the shoulder of the outside corridor lanes, and on the outside of the perimeter barrier between the local roadway system and the secure corridor. This would discourage people from walking or driving next to the barrier.
  - 5. Any buffer areas should be monitored with devices such as intelligent cameras and motion sensors. In order for remote monitoring to be successful, cameras and sensors must be monitored, adequate lighting must be provided, and agency personnel must have the ability to rapidly respond.
  - 6. Design of the plaza should include controlled access points for emergency vehicles at both the north and south sides of the plaza.

The effects of the alternatives on security and emergency services for the plaza and surrounding community, and recommended design elements specific to each alternative are discussed below.

### **3.5.3 Effects of the Alternatives on Public Safety and Security**

Any security measures proposed for the alternatives must take into consideration the threat risk, cost, and effectiveness. A reasonable combination of measures should be provided to deter a reasonable threat.

No-Build Alternative: The No-Build Alternative will not change the current access points for emergency service providers. The main impact of this alternative on emergency services will be delays due to congestion in responding to emergency calls on the plaza or in the vicinity of the plaza. This is due to

projected traffic backups on the Black River Bridge and along major north-south streets such as Pine Grove Avenue and the M-25 Connector.

The No-Build Alternative does not include any specific security improvements to the existing plaza. CBP has discussed the likelihood of some security improvements over time, as funding permits. These improvements would not include the same security features as in the City East, Township, and Preferred Alternatives.

*City East Alternative:* This alternative provides two controlled access points for emergency service personnel. One access will occur on the north side of the plaza, and the other on the south side of the plaza. Emergency service access to the plaza from the west will be similar to the No-Build Alternative. Most of the plaza would be at ground level.

The following security design elements are proposed for the City East Alternative:

1. Eight-foot high perimeter barriers at strategic locations along the perimeter of the plaza. The use of landscaping, bollards, planters, grading, etc. can soften the visual impact of the perimeter barriers. The design details for the perimeter barrier will be addressed at the final design phase of the project.
2. Controlled access points into the secure plaza located at the north and south boundaries of the plaza, for emergency service personnel.

The City East Alternative would have little or no effect on emergency service response times to and from the plaza, with response times similar to current response times shown in **Table 3.5.1**.

There are two major north-south roadways through this area of the city, 10<sup>th</sup> Avenue (four lanes) and Pine Grove Avenue (five lanes). This alternative would reroute Pine Grove Avenue to share the roadway with the existing 10<sup>th</sup> Avenue and eliminate the portion of Pine Grove Avenue that runs under the plaza, thus combining, for a short distance, these



Plaza over Pine Grove Avenue

two roadways into one five to seven-lane roadway. Emergency service response times to neighborhoods and businesses north and south of the plaza could be affected in the event of an incident on the relocated roadway that would block traffic. Emergency service along I-94/I-69 would be improved with better separation of local and plaza traffic.

Currently, the Blue Water Bridge Plaza is a major hazardous materials crossing and will continue to be. The existing plaza has an emergency spill containment area. This feature will also be incorporated into City East Alternative. It will be important to be able to quickly access the plaza in the event of a spill.

City West (Preferred) Alternative: This alternative provides two controlled access points for emergency service personnel. One access will occur on the north side of the plaza from Hancock Street, and the other on the south side of the plaza via the relocated Pine Grove Avenue. Emergency service access to the plaza from the west will be similar to the No-Build Alternative via the I-94/I-69 approach. Most of the plaza would be at ground level.

The following security design elements are proposed for the Preferred Alternative:

1. Eight-foot high perimeter barriers at strategic locations along the perimeter of the plaza. The use of landscaping, bollards, planters, grading, etc. can soften the visual impact of the perimeter barriers. The design details for the perimeter barrier will be addressed at the final design phase of the project.
2. Controlled access points into the secure plaza located at the north and south boundaries of the plaza, for emergency service personnel.



Plaza over Pine Grove Avenue

The Preferred Alternative would have little or no effect on emergency service response times to and from the plaza, with response times similar to current response times shown in **Table 3.5.1.**



There are two major north-south roadways through this area, 10<sup>th</sup> Avenue (four lanes) and Pine Grove Avenue (five lanes). This alternative would relocate Pine Grove Avenue to the west from its intersection with 10<sup>th</sup> Avenue and tie into the M-25 Connector. This will eliminate the portion of Pine Grove Avenue that runs under the plaza. Emergency service responders will be able to access the neighborhoods and businesses north and south of the plaza via 10<sup>th</sup> Avenue and Pine Grove Avenue.

Emergency service along I-94/I-69 would be improved with better separation of local and plaza traffic.

Currently, the Blue Water Bridge Plaza is a major hazardous materials crossing and will continue to be. The existing plaza has an emergency spill containment area. This feature will also be incorporated into the Preferred Alternative. It will be important to be able to quickly access the plaza in the event of a spill. Estimated response times for the Preferred Alternative are shown in **Table 3.5.2**.

**Table 3.5.2 Estimated Emergency Service Response Times\* To Selected Locations (in minutes)**

	No-Build	City East	City West	Township	
	To Plaza	To Plaza	To Plaza	To New Plaza	To Existing Plaza
<b>Port Huron Township Fire Department</b>	5	5	5	3	6
<b>St. Clair County Sheriff</b>	3	3	3	2	5
<b>City of Port Huron Fire Department</b>	2	2	2	5	8
<b>City of Port Huron Police Department</b>	3	3	3	5	8
<b>Tri-Hospital EMS</b>	5	5	5	10	13
*Maximum times rounded to nearest whole number. Estimated times assume the shortest route to the destination.					

Township Alternative: There are no specific design criteria for a secure corridor as proposed for the Township Alternative in GSA or CBP standards.

The Township Alternative creates three distinct areas that will need security and emergency service access. They are: (1) the existing plaza area, (2) the secure roadway between the existing plaza and the new plaza, and (3) the new plaza.

Emergency access to the new plaza would occur from the north side via a controlled gate at the end of Eastland or Westland Drive, or an alternate driveway. Emergency access to the south side of the plaza would occur via I-94/I-69 or the Lapeer Connector.

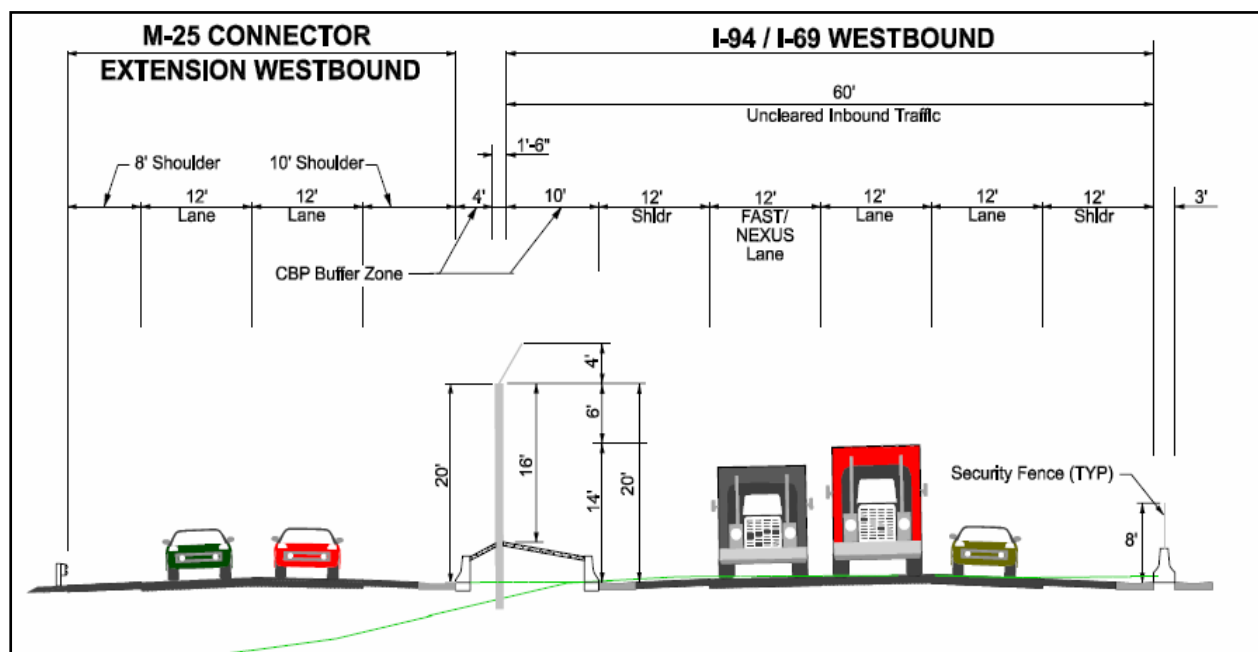
Under the Township Alternative, the plaza infrastructure will be in both Port Huron Township and the City of Port Huron. The inspection stations and support facilities will be in Port Huron Township and the Duty Free Store and maintenance facility will be in the City of Port Huron. The secure roadway corridor will be split between the two jurisdictions. This design layout will require close interaction between emergency service providers from St. Clair County, Port Huron Township, and the City of Port Huron. It will be important to establish clearly defined roles and responsibilities for the delivery of emergency services by the jurisdictions involved.

Currently, the Blue Water Bridge Plaza is a major hazardous materials crossing and will continue to be. The existing plaza has an emergency spill containment area. This feature will also be incorporated into the Township Alternative. It will be important to be able to quickly access the plaza or secure corridor in the event of a spill as the spills will be occurring further inside the country.

Special attention will need to be given to traffic safety within the secure corridor. It will be important to control speeding and have the ability to notify the public of any traffic delays within the corridor. Some of the ways this might be accomplished is to post slower speed limits for the corridor and use variable message signs to notify the public.

The following design elements are proposed for this Alternative:

1. Eight-foot high perimeter barriers at strategic locations along the at-grade areas of the plaza. The use of landscaping, bollards, planters, grading, etc. can soften the visual impact of the perimeter barriers. The design details for the perimeter barrier will be addressed at the final design phase of the project.
2. Twenty-foot high perimeter barriers along the outside of the outbound and inbound lanes of the secure roadway corridor.
3. A 12-foot wide shoulder along the outside lanes of inbound and outbound traffic to assist emergency service providers in reaching an incident.
4. A buffer area up to 10-feet wide between the 20-foot high perimeter barriers and the shoulders of the outside lanes of both inbound and outbound traffic within the secure roadway corridor with a concrete median barrier at the edge of the shoulder.



**Figure 3.5.1 A Typical Cross Section of the Secure Corridor in the Township Alternative**

5. A buffer area up to four-feet wide along the outside of the perimeter barriers of the secure corridor, containing a low-level barrier to discourage people from walking or driving next to the barrier.
6. A twenty-foot high barrier dividing the inbound and outbound lanes within the secure corridor.

Design details for the proposed barriers (i.e., wall specifications, gate types, etc.) will be addressed during the final design phase of the project.

The Township Alternative introduces new potential safety issues. The extended plaza roadway system between the Blue Water Bridge and the new plaza would pose significant challenges to providing emergency vehicle services to the plaza, the connecting corridor, and the bridge. Emergency vehicles and local law enforcement would only be able to access the secure corridor from the inspection plaza in Port Huron Township or from Canada. The secure corridor between the bridge and the plaza would also pose enforcement issues as to how to police this corridor to ensure proper traffic control and speed.

The Township Alternative would have little effect on emergency service to the City of Port Huron. However, depending on the emergency service provider, there could be longer response times in reaching an incident on the new plaza in Port Huron Township or in the secure corridor. The Township Alternative would improve local emergency service along the M-25 Connector with the separation of local and plaza traffic. Estimated response times for the Township Alternative are shown in **Table 3.5.2**.

#### **3.5.4 Comparison of Emergency Response Times by Alternative**

Rapid emergency service response to incidents is critical for the safety of the public and plaza staff. **Table 3.5.2** compares the estimated response times of the emergency service providers for each alternative.

Response times were estimated by determining the ratio between current response time and travel distance to the existing plaza, by the respective emergency service provider. Current response times were based on interviews with the emergency service providers. Travel distances were determined by measuring the distance between the beginning and end point of the most direct route to the plaza. This ratio was then applied to plaza locations for the alternatives to calculate estimated response times.

The emergency response provider most affected by the Township Alternative is Tri-Hospital EMS. The estimated response time doubles when responding to an incident at the new plaza located in Port Huron Township as compared to incidents on the existing plaza. There is no national standard response time for ambulance service; however, local service guidelines and contracts typically establish a response time of eight to ten minutes or less 90 percent of the time for urban areas, and 12-15 minutes or less 90 percent of the time for rural areas. This is the standard that Tri-Hospital EMS has committed to under current contracts with the City of Port Huron and Port Huron Township. The estimated ambulance response time to the new plaza in the Township Alternative would comply with these contract standards. The estimated response time to the existing plaza in the Township Alternative would not comply with the contract standards due to the limited access to the existing plaza and secure corridor. Access to the existing plaza will be available only westerly from the Blue Water Bridge or easterly from the secure corridor. Emergency vehicles will have to enter the new plaza site, pass through customs, and then travel the secure corridor easterly to reach the existing plaza.

The City East Alternative and Preferred Alternative would have little effect on the response times for fire and police, depending on the service provider. As expected, the City of Port Huron Fire Department would have better response times to incidents involving plaza facilities that are located in the city limits (No-Build, City East, and Preferred Alternative), and the Port Huron Township Fire Department would have better response times to incidents involving plaza facilities located in the township (new plaza in the Township Alternative).

The City of Port Huron Police Department and the St. Clair County Sheriff's Office have comparable estimated response times to incidents associated with any of the alternatives.

## 3.6 Relocations

All of the Build Alternatives will require MDOT to purchase existing homes and businesses in the Study Area. These are called relocations. Residential relocations are homes that must be purchased including single family homes, duplexes, apartments, and condominiums. Commercial relocations are businesses that must be purchased including stores, offices and restaurants. Relocations will only be necessary if a Build Alternative directly impacts a home or business. The City East Alternative will require the displacement of 155 residential units, 34 businesses, and one community facility (church). The City West (Preferred) Alternative will require 129 residential, 30 business, and one church relocation(s). The Township Alternative will require 56 residential, and 29 business relocations. The following discusses the existing real estate market in the Port Huron area and the relocations required for each Build Alternative. This information will be used to review the availability of similar housing and sites for the households and businesses that will be displaced by the Build Alternatives.



**All of the Build Alternatives  
require homes and  
businesses to be purchased**

### 3.6.1 What is the Current Real Estate Market in St. Clair County?

The Eastern Thumb Association of Realtors, which covers St. Clair, Sanilac, and parts of Lapeer and Macomb Counties, reported 1,349 home sales in the entire year of 2006, with an average selling price of \$155,252. Given their age, size, and assessed values, homes in the Study Area would generally sell for lower average prices than those reported for the Eastern Thumb area. **Table 3.6.1** illustrates the availability of different types of housing within the Port Huron Area according to the Multiple Listings Service at [www.realtor.com](http://www.realtor.com) as of December 2006. This table does not include private sales by owners or agents not affiliated with the web site.

**Table 3.6.1 Houses Listed For Sale on the Multiple Listings Service at Realtor.Com - 2006**

Housing Price Range/Type	Port Huron	St. Clair County
\$0 to \$50,000	16	35
\$50,000 to \$100,000	297	461
\$100,000 to \$150,000	223	790
\$150,000 to \$200,000	67	720
\$200,000 +	130	1472
1 Bedroom	6	29
2 Bedroom	165	488
3 Bedroom	341	1955
4 Bedroom	113	724
5 Bedrooms or more	103	279

The number of residential building permits issued in St. Clair County in 2006 was 460. The City of Port Huron accounted for 34 residential building permits and Port Huron Township accounted for 29 of the total St. Clair County residential building permits. **Table 3.6.2** shows the residential building permits issued in 2006.

**Table 3.6.2 Residential Building Permits – 2006**

Location	Single Family/ Detached Condo	Town- house/ Attached Condo	Two- Family/ Duplex	Multi- Family/ Apartments	Total New Units
St. Clair County	452	4	4	0	460
City of Port Huron	34	0	0	0	34
Port Huron Township	29	0	0	0	29

Source: Southeast Michigan Council of Governments

The City of Port Huron Comprehensive Plan states, “there are a sizeable number of under-represented retail and related service establishments in Port Huron and the County when



compared to other communities.” The Comprehensive Plan also concluded that St. Clair County has relatively fewer restaurants and bars than other comparison communities and that there is the potential for the City of Port Huron and the immediate area to expand by about 290,000 square feet of retail and related services space.

The total amount of non-residential development under construction in St. Clair County in 2005 was 419,683 square feet. This accounts for one percent of the Southeast Michigan Council of Governments (SEMCOG) region’s development. Some of the commercial/business development is taking place in the Fort Gratiot Township and the Port Huron communities. In 2005, Fort Gratiot Township completed 1,905 square-feet of non-residential development for a Lynn Brandl Accounting office. The City of Port Huron is expected to complete 40,400 square feet of mixed-use development for the Blue Water Ambulatory Surgery Center as well as an E&A Credit Union. **Table 3.6.3** shows the amount of non-residential square feet completed or under construction in the region.

**Table 3.6.3 Non-Residential Development – 2005/2006**

<b>Location</b>	<b>Completed (square feet)</b>	<b>Under Construction (square feet)</b>
<b>St. Clair County</b>	284,561	135,122
<b>Fort Gratiot Township</b>	1,905	0
<b>Port Huron</b>	0	40,400
Source: Southeast Michigan Council of Governments		

Local realtors indicate that businesses are growing in the Port Huron area. The long-term trends for commercial development in the Port Huron region are positive as local realtors are seeing an increase in business relocations from the Detroit Metropolitan region to Port Huron. The presence of the Blue Water Bridge also assists businesses in the City of Port Huron. The type of commercial space currently available in Port Huron includes a mixture of office, factory, restaurant and retail space. Local realtors indicate that the existing supply of commercial properties exceeds the demand for commercial space.

### 3.6.2 What are the Relocations Required for Each Build Alternative?

The selection of a Build Alternative will require the relocation of homes and businesses. The following paragraphs discuss the number and type of relocations for each Build Alternative. Acquisition of parcels and buildings will be needed in both Port Huron Township and the City of Port Huron for all of the Build Alternatives.

Assumptions and Methodologies: The relocations identified for each alternative represent the worst case scenario. For the most part, if any land was required from a parcel with a residence or business on it, it was counted as a relocation. The relocation figures will be refined in the design phase of the project. Through engineering refinements there may be opportunities to reduce the number of relocations needed for each alternative. In order to determine the availability of replacement housing and commercial property, 2000 Census Data for the affected communities was reviewed and local realtors serving the Study Area were contacted.

MDOT will compensate homeowners that are relocated and assist with the relocation process. All relocation assistance would be provided in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Resources will be made available without discrimination to all residential and business owners who are relocated. Under the requirements of this Act no relocations can occur until it is shown that comparable housing is available in the area for relocation purposes. Replacement housing must be similar both in type and price range. Typically, community facilities that are relocated by a project require rebuilding rather than relocation.

The average price for homes in the Port Huron area is approximately \$155,252 with prices ranging from \$80,000 to over \$150,000 in the city and township portions of the Study Area. Near Lake Huron and the St. Clair River, home prices were \$200,000 and higher. There are a wide variety of home styles on the market. **Table 3.6.1** lists the number of homes recently available in St. Clair County at various sizes and price ranges.

No-Build Alternative: The No-Build Alternative would not require any relocations.

Impacts of the Build Alternatives: The relocation estimates are based on a worse case scenario of acquiring all structures on parcels whose land is required for a Build Alternative. The residential relocations of each Build Alternative consists of single family homes and multi-family units, and are representative of the overall housing stock within the Study Area. As shown in **Table 3.6.4**, the City East and City West Alternatives require substantially more relocations than the Township Alternative. Most of the homes that may be relocated are owner occupied. Some multi-unit rental property relocations are required; a few of the relocations are single family home rentals. There is a multi-unit condominium property whose residents will need to be relocated for all Build Alternatives. Analysis of census data and community information indicates that the residential displacements would include a small percentage of minority and low income households. Impacts to minority and low income households are discussed further in **Section 3.3 Environmental Justice**.

**Table 3.6.4 Relocation Impacts by Alternative and Community**

Alternatives/ Community		Residential			Business				Community Facilities		
		Single-Family	Multi-Family	Residential Total	Service	Retail	Business Total	Vacant Sites for Sale/Rent	Churches	Other Community Facilities	Community Facilities Total
City East Alternative	City of Port Huron	128	24	152	16	15	31	6	1	-	1
	Port Huron Township	3	-	3	2	1	3	-	-	-	-
	<b>City East Alt. Total</b>	<b>131</b>	<b>24</b>	<b>155</b>	<b>18</b>	<b>16</b>	<b>34</b>	<b>6</b>	<b>1</b>	<b>-</b>	<b>1</b>
City West Alternative	City of Port Huron	102	24	126	15	13	28	6	1	-	1
	Port Huron Township	3	-	3	1	1	2	-	-	-	-
	<b>City West Alt. Total</b>	<b>113</b>	<b>24</b>	<b>129</b>	<b>16</b>	<b>14</b>	<b>30</b>	<b>6</b>	<b>1</b>	<b>-</b>	<b>1</b>
Township Alternative	City of Port Huron	23	24	47	9	14	23	-	-	-	-
	Port Huron Township	9	-	9	3	3	6	-	-	-	-
	<b>Twp. Alt. Total</b>	<b>32</b>	<b>24</b>	<b>56</b>	<b>12</b>	<b>17</b>	<b>29</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

The business relocations for each Build Alternative would also require the relocation of a number of jobs. An estimate of the jobs connected with the business relocations is presented in **Table 3.6.5**. These estimates were made through contacting the businesses that would be potentially relocated. In instances where an employment count for a business was unavailable, an estimate was made based on similar businesses in the Study Area. These estimates do not include the employees who work on the plaza and would be relocated from the City of Port Huron to Port Huron Township under the Township Alternative. The impact of those job relocations is discussed in **Section 3.4 Economics**.

**Table 3.6.5 Estimated Job Relocations\***

<b>Alternative</b>	<b>Number of Estimated Commercial/ Industrial Relocations</b>	<b>Estimated Total Jobs Relocated</b>
<b>No-Build</b>	0	0
<b>City East</b>	34	390
<b>City West</b>	30	370
<b>Township</b>	29	395
* These estimates do not include the employees who work on the plaza and would be relocated from the City of Port Huron to Port Huron Township under the Twp. Alt.. The impact of those job relocations is discussed in <b>Section 3.4 Economics</b> .		

*City East Alternative:* The City East Alternative has the largest number of relocations of the Build Alternatives. Commercial businesses in the Blue Water Gateway Area, Pine Grove Avenue mixed-use corridor, and along Water Street would require relocation. The City East Alternative requires 34 commercial relocations. The businesses relocated by this alternative are small to medium sized establishments (generally 25 people or fewer). The retail/service businesses are typical of those in most communities similar in size of those in the Study Area. These businesses should be able to find comparable new locations relatively easily. Few long-term job losses are expected with the City East Alternative as it relocates businesses that are not highly dependent on their current locations. Approximately 75 percent of the businesses relocated by this alternative own their property.

The City East Alternative would have 155 residential relocations, the largest number of relocations of the Build Alternatives. Expanding the Blue Water Bridge Plaza with this alternative, would require the displacement of residents occupying homes on both the north and south side of the existing plaza. In addition, the City East Alternative requires the relocation of a church. This alternative would impact the Port Huron Area School District, as it would require approximately 11 acres of the district's land. No school buildings or facilities would be relocated.

The City East Alternative requires relocations along Hancock Street, Pine Grove Avenue, 10<sup>th</sup> Avenue, 11<sup>th</sup> Avenue, 12<sup>th</sup> Avenue, Church Street, Elmwood Street, Harker Street, Mansfield Street, Scott Avenue, Riverside Drive, Water Street, and Maywood Drive. The overall exhibits of the City East Alternative, **Figure E.3** located in the separate **Appendix E** volume, show the relocations for this alternative.

*City West (Preferred) Alternative:* The City West Alternative has the second largest number of relocations of the Build Alternatives. As with the City East Alternative, commercial businesses in the Blue Water Gateway Area, Pine Grove Avenue mixed-use corridor, and along Water Street would require relocation. The City West Alternative requires 30 commercial relocations. Similar to the City East relocations, the businesses relocated by this alternative are small to medium sized establishments (generally 25 people or fewer). The retail/service businesses should be able to find comparable new locations relatively easily. Few long-term job losses are expected with this alternative as it relocates businesses that are not highly dependent on their current locations. As with the City East Alternative, approximately 75 percent of the businesses relocated by this alternative own their property.

The City West Alternative would have 129 residential relocations. This alternative would require the displacement of residents occupying homes on both the north and south side of the existing plaza, as well as the relocation of a church. This alternative would impact the Port Huron Area School District, as it would require approximately 11 acres of the district's land. No school buildings or facilities would be relocated.

The Preferred Alternative requires relocations along Hancock Street, Pine Grove Avenue, 10<sup>th</sup> Avenue, 11<sup>th</sup> Avenue, 12<sup>th</sup> Avenue, Church Street, Elmwood Street, Harker Street, Mansfield Street, Scott Avenue, Riverside Drive, Water Street, and Maywood Drive. The overall exhibits of the City West Alternative, **Figure E.4** located in the separate **Appendix E** volume, show the relocations for this alternative.

Township Alternative: The Township Alternative would have 29 business relocations. The businesses relocated by the Township Alternative are small to medium size establishments (25 or less employees). The businesses requiring relocation include health offices, service retailers, fast food/restaurants and commercial office space. It is expected that these businesses will be able to find comparable new locations within the community. Few long-term job losses are expected with this alternative, as it has fewer business relocations and relocates businesses that are not highly dependent on their current locations. Approximately 65 percent of all the businesses relocated by the Township Alternative own their premises.

The Township Alternative would have 56 residential relocations. The proposed plaza is located in Port Huron Township and occupies 153 acres of vacant, residential and MDOT owned land. This alternative would impact the Port Huron Area School District, as it would require approximately 11 acres of the district's land. No school buildings or facilities would be relocated. A local private marina would also need to be relocated.

The Township Alternative requires relocations along Hancock Street, Pine Grove Avenue, 10<sup>th</sup> Avenue, Harker Street, Mansfield Street, Scott Avenue, Riverside Drive, Water Street, and Maywood Drive. The overall exhibits for this alternative, **Figure E.5** located in the separate **Appendix E** volume, show the relocations for the Township Alternative.

Availability of Replacement Property: Replacement property should be of a similar size and pricing of the original home. No relocations can occur until it is shown that comparable housing is available. Port Huron has a wide variety of neighborhoods with schools and parks including homes with a range of values that should provide adequate housing for those that are required to relocate. **Table 3.6.1** lists available housing in the City of Port Huron and St. Clair County. See the Conceptual Relocation Plan in **Appendix B** for more information on replacement property potential in the area.

## 3.7 Indirect and Cumulative Impacts

This section analyzes the potential indirect and cumulative impacts of the proposed project. The area of analysis includes the City of Port Huron, Port Huron Township, Kimball Township, and Fort Gratiot Township. **Figure 3.7.1** shows the analysis area. This section will analyze the indirect and cumulative effects of the proposed project on land use, traffic patterns, farmland, and wetlands. These issues are discussed because they have the greatest potential to be affected, indirectly or cumulatively, by the project.

### 3.7.1 Why Do We Look at Existing Conditions and Development Trends?

When considering a project's indirect and cumulative effects, it is important to understand past and current conditions of the natural and built environment, and use these observations as a point of reference for assessing the project's potential affect on a particular natural or cultural resource. The following discussion sets the stage for understanding current conditions and development trends in areas that may be affected, indirectly or cumulatively, by the project.

### 3.7.2 What is the Development History of the Port Huron Area?

The location and nature of the formal border crossings in the Port Huron, Michigan-Sarnia, Ontario area have affected regional development since the middle of the 19<sup>th</sup> century. The City of Port Huron was incorporated in 1857, with a population of more than 3,000. Between 1859 and 1872, a chain ferry operated between Fort Gratiot and Point Edward, in the vicinity of the existing Blue Water Bridge. The railroad reached Port Huron from Detroit in 1857 and the depot was located in the Village of Fort Gratiot near the site of the existing Blue Water Bridge. By 1877, Port Huron was connected to Chicago via rail. A steam ferry replaced the chain ferry in 1872. In 1885, new ferry docks were located on Quay Street in downtown Port Huron. The Fort Gratiot Steam Ferry closed in 1892. The original rail tunnel under the St. Clair River was opened in 1891 and the rail depot moved to a location on 22<sup>nd</sup> Street, southwest of downtown Port Huron.

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#### What Are Direct Impacts?

Direct impacts are caused by the construction of the project. Direct impacts are covered mostly in **Chapter 3 The Environment: What's There Now and Project Effects** and are a simple cause and effect. Example: A wetland is filled to accommodate construction of a roadway. **Section 3.7** will cover the impacts that are not direct impacts.

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#### What Are Indirect Impacts?

Indirect impacts are caused by the project and are later in time or farther removed in distance than direct impacts, but are still "reasonably foreseeable." Consider the construction of a new highway on what is now farmland. With increased access to this rural area, developers build new residential developments, and new houses increase demand on water supplies. The construction of the homes and increased water consumption are not directly caused by road construction, but rather are indirect impacts.

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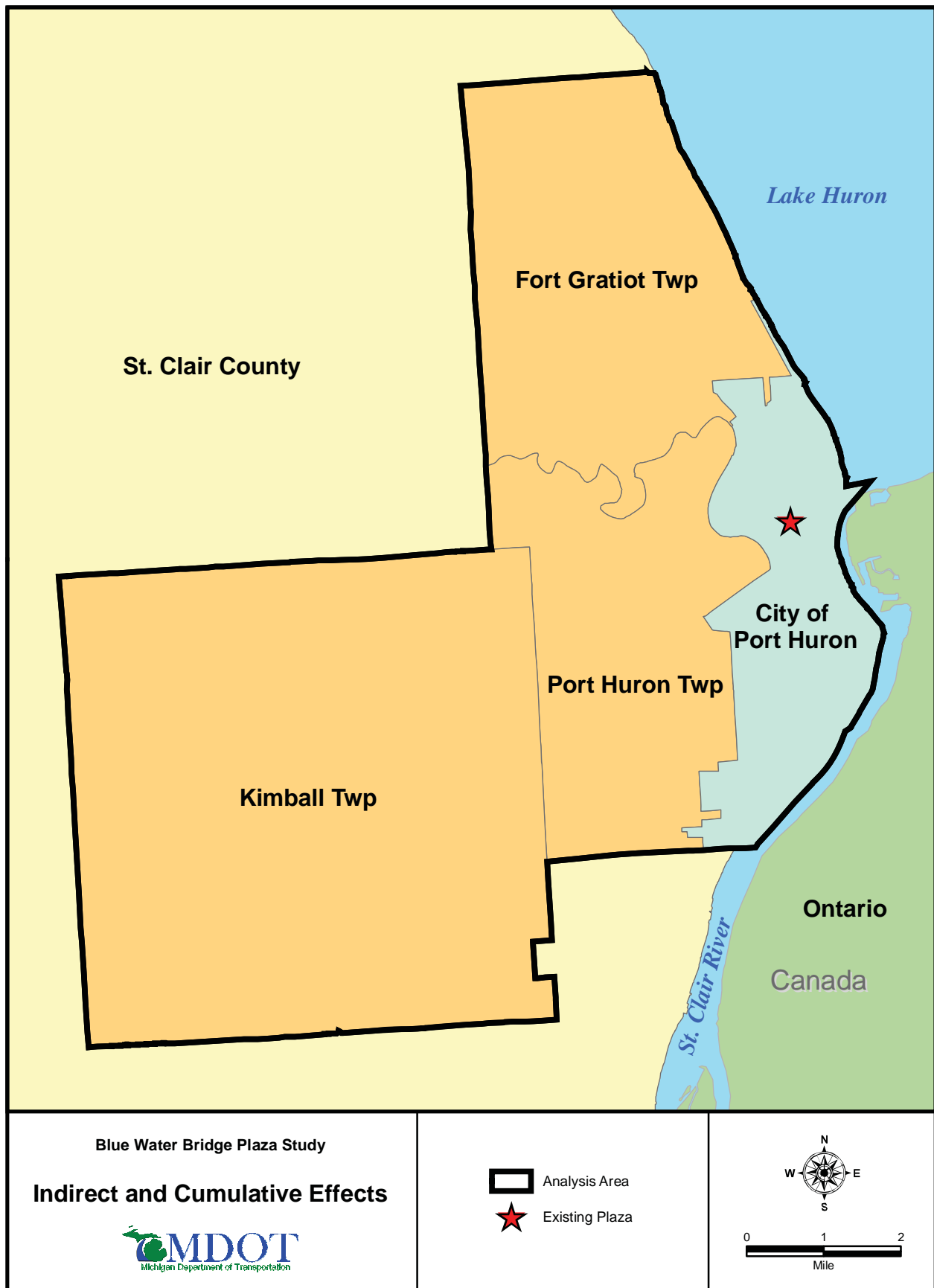


Figure 3.7.1

At this point, all major border crossing and transportation operations had shifted from the Village of Fort Gratiot to central Port Huron. In 1893, the Village of Fort Gratiot was annexed into the City of Port Huron, including the location of the existing Blue Water Bridge and plaza.

The population of Port Huron grew dramatically between 1880 and 1930, from 8,883 to 31,361, a 250 percent increase. In that same period, transportation and shipping increased both across the St. Clair River and along the St. Clair River between Lake St. Clair and Lake Huron. Various advancements to the regional transportation system included inter-urban rail (1886-1920s), the first concrete-paved street (1912), the 10<sup>th</sup> Street two-lane swing bridge (1898, replaced in 1958), the opening of M-21 to Flint, Michigan (1921-22), and the designation of US-25 on Gratiot Avenue (1926). In 1922, the explosion of a ferry boiler downtown prompted the relocation of the docks to the St. Clair River, at Grand River Avenue. In this same period, the residential and commercial portions of the city increased in size.

Other important events were the opening of the Blue Water Bridge in 1938, and the long-term decline of the Port Huron – Sarnia passenger ferry services with the last river ferry (City of Sarnia) sinking at the dock in 1948. By the early 1960s, Port Huron was fully built out to the city limits, the Blue Water Bridge Bonds were paid off, and Interstate 94/US-25 was completed from Mount Clemens, Michigan to Lapeer Road in Port Huron, connecting the Detroit area to the Blue Water Bridge and Canada. By 1966, the M-21 (later I-69) freeway was completed from Wadhams Road to I-94, and extended to Flint by 1971. The I-69 Corridor, from the Blue Water Bridge to Flint, was completed in 1985. The Michigan economy slowed in the 1980s; the United States-Canada Free Trade Agreement was signed in 1989, and the North American Free Trade Agreement in 1992.

The 1990s brought a new double-stack rail tunnel under Port Huron in 1995, rendering the rail ferry obsolete. This was followed by the construction of the second span of the Blue Water Bridge and expansion of the bridge plaza in the period from 1997-1999. By 2000, the population of St. Clair County was 164,235 while the U.S. population was 275 million. At this

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### **What Are Cumulative Impacts?**

Cumulative impacts are impacts on the environment resulting from the incremental impact of the project when added to other past, present, and reasonably foreseeable future projects regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. An example: Homes were acquired for the original construction of the Blue Water Bridge and plaza. When the bridge and plaza were upgraded in the 1990s, additional homes were acquired. This next phase of improvement to the plaza will result in yet more homes being acquired. While the direct impact of residential acquisition from the current project is at one level, the cumulative effect of the bridge on housing in Port Huron since the 1930s has been much greater.

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time, the Canadian population was 30 million and the Sarnia area, consisting of Lambton County, had a population of 131,800. The September 11, 2001 attacks on the United States ushered in a heightened emphasis on homeland security. By 2005, the last commercial cargo dock and rail yard in Port Huron were closed. There are 30 oil and gas pipelines that cross the St. Clair River into Canada.

### 3.7.3 Description of Development in St. Clair County and the Port Huron Area



Blue Water Bridge

The majority of St. Clair County's urban development has occurred along its eastern shorelines with Lake Huron, the St. Clair River, and Lake St. Clair. Outside of the county's urban population centers, residential uses primarily line major and minor roadways with commercial uses located at the intersections. Southern portions of the county have been experiencing development pressures for housing and commercial centers, to accommodate people commuting to Detroit for work. Port Huron is currently the largest population center in the county.



Existing Border Plaza

Existing Plaza Area: The existing plaza area includes all facilities built to date to process the international traffic leaving and entering the United States. The Blue Water Bridge was first constructed in 1938 and a new span added in 1997, doubling the capacity of the bridge. The most recent improvements to the plaza were completed around 1997. The plaza was constructed after the original development of the area. The original approaches to the bridge ran through a residential area along Elmwood Street. The location of the bridge (and therefore the area originally impacted by the plaza) was influenced by soils and height requirements for the bridge, and the need for easy access to Sarnia, Ontario and downtown Port Huron. It is clear that the plaza has influenced land development patterns in the immediate area for some time.

In general, the primary land uses that surround the plaza include medium-high density commercial and low-medium density residential. A detailed description of existing land uses around the plaza can be found in **Section 3.1 Land Use and Zoning**.

Downtown Port Huron: Downtown Port Huron, like many other Midwestern downtowns, reflects the patterns of development from the late 19<sup>th</sup> and early 20<sup>th</sup> centuries. The downtown straddles both sides of the Black River and offers a mix of commercial and governmental uses typically found in a downtown area of a small to medium-sized city. The location of downtown Port Huron is shown on **Figure E.1** located in the separate **Appendix E** volume.

Fort Gratiot Township: Fort Gratiot Township, north of the plaza and Port Huron, has a more suburban pattern of development than does Port Huron. Modern commercial development is located along M-25 which includes a shopping mall and auto-oriented strip commercial. Typical businesses include such stores as Wal-Mart, Home Depot, and Meijer. Residential development occurs at a lower density in Fort Gratiot Township than in Port Huron.

Water Street and I-94/I-69 Interchange: The Water Street and I-94/I-69 Interchange offers the first southern exit for people traveling from Canada to the United States, via the plaza. A highway rest area, Port Huron Township Parks No. 1 and No. 2, motel, and highway-oriented commercial businesses are located on the north side of the interchange. Development immediately south of the interchange consists of highway-oriented commercial and a marina.

M-25 Connector and Hancock Intersection: This is the first intersection encountered by people traveling north after crossing the Blue Water Bridge from Canada. Typical highway oriented commercial development is located on the east side of the intersection and residential development on the west.

Wadhams Road and I-69 Interchange: The Wadhams Road and I-69 Interchange is the first interchange after the Water Street, I-94/I-69 Interchange when traveling west on I-69. **Figure 3.7.2** provides an aerial view of the area around Wadhams Road and the I-69 Interchange. Commercial and light-industrial businesses located at this interchange include a gas station, an auto repair shop a fast-food restaurant, an animal clinic, and a heating service. A low-density residential development is located at the southwest quadrant of the interchange. There



**Wadhams Road Businesses**



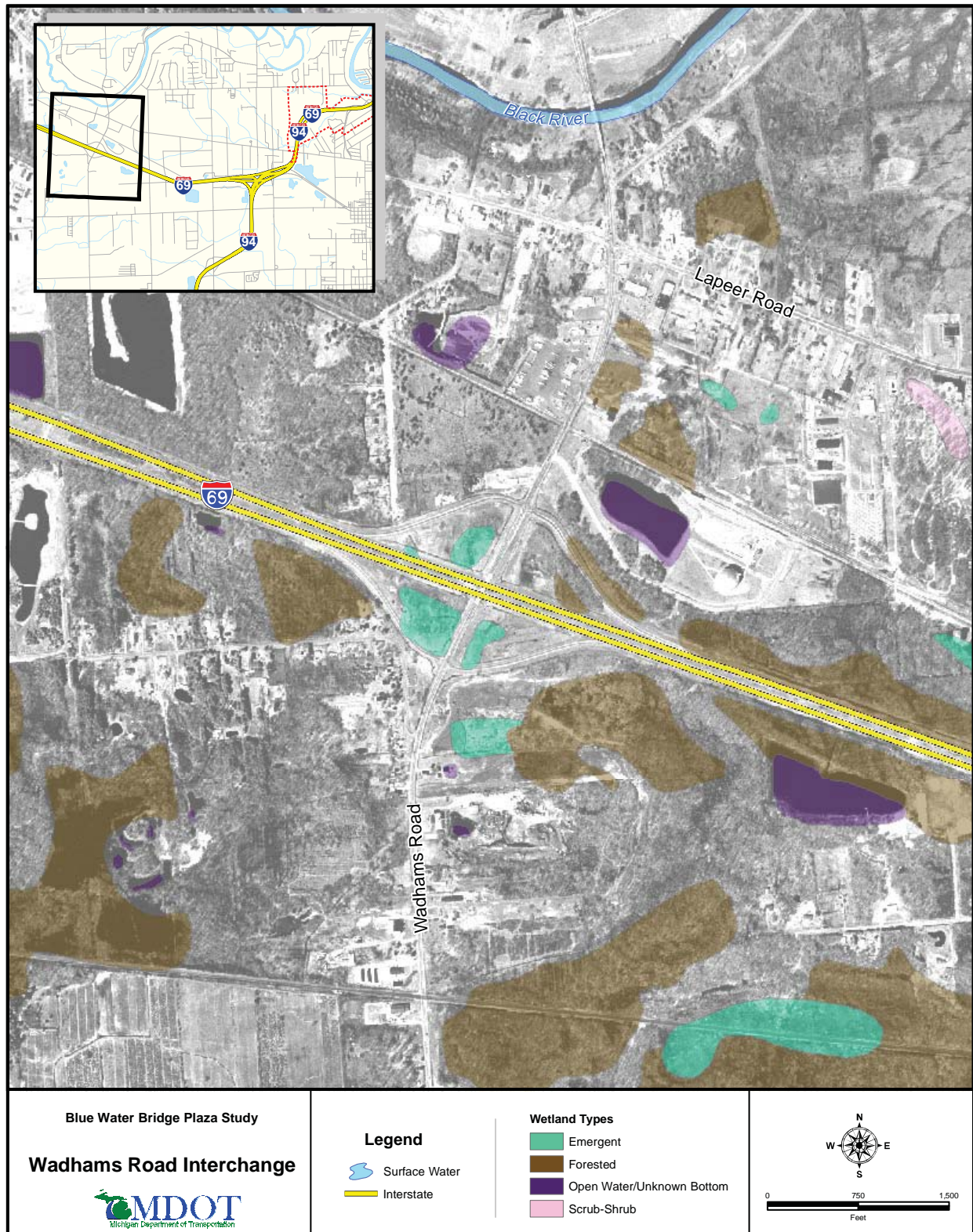


Figure 3.7.2

are vacant restaurant and small business sites mixed in among the active businesses.

*Range Road and I-94 Interchange:* The Range Road and I-94 Interchange is the first interchange after the Water Street and I-94/I-69 Interchange when traveling south on I-94, from the plaza. **Figure 3.7.3** provides an aerial view of the area around the Range Road and I-94 Interchange. There is a mix of residential, commercial, and light industrial development in the vicinity of the interchange. A retail outlet mall with a number of commercial vacancies is located at the northwest corner of the interchange. Development immediately east of the interchange consists of a mix of land uses that include single-family residences, a glass supply company, a wholesale landscape company, an auto auction business, and an ice arena.



**Range Road Outlet Mall**

*Acheson Ventures Development:* Acheson Ventures is a proposed redevelopment project that will provide mixed use development along the St. Clair River approximately 2.5 miles south of the existing plaza. Along with the creation of the Harborside Office Center and a Cruise Ship Terminal, this development will revitalize one mile of Port Huron waterfront property that has historically been industrial waterfront and railroad land uses. Development improvements include a naturalized park, bike path, and boat basin. The Harborside Office Center will provide 100,000-square feet of office and commercial space and a 340-car parking garage.

### **3.7.4 What are the Indirect Impacts?**

Indirect impacts occur later in time, or are further removed in distance, than direct effects. An example of an indirect impact would be land use changes that occur along a newly constructed highway, such as the development of motels. While the new highway did not directly cause the construction of motels, it encouraged their construction by providing improved automobile access to the area. In turn, these motels may have filled wetlands to accommodate construction. In this case, the newly constructed highway would have an indirect effect on both commercial growth and wetlands.



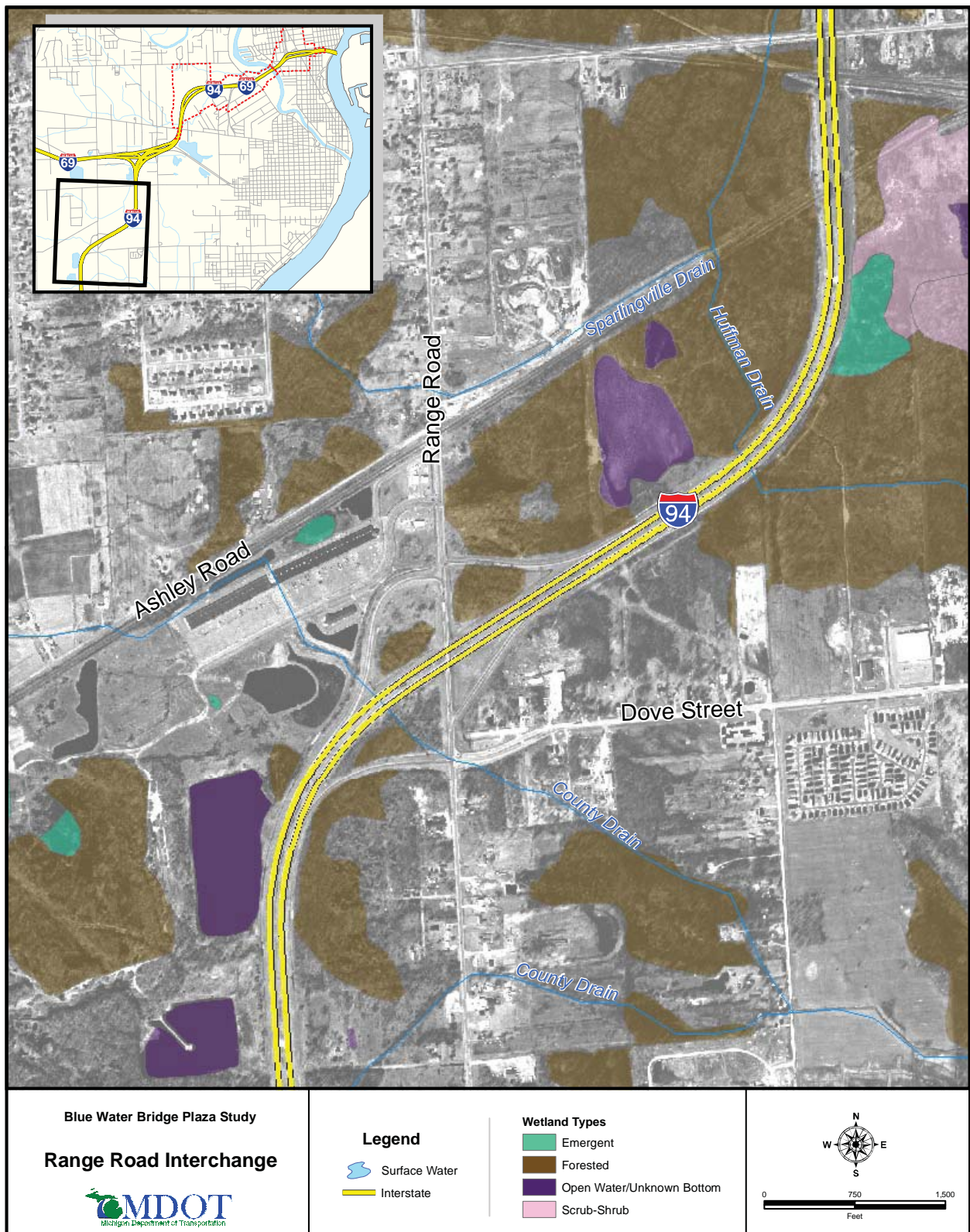


Figure 3.7.3

The alternatives have the potential to indirectly impact land use, businesses, traffic patterns, farmlands, and wetlands. The following discussion addresses how each proposed alternative may indirectly affect these elements of the environment.

*No-Build Alternative:* The No-Build Alternative would not involve any expansion of the existing plaza. There would likely be some layout changes to improve the operation of the plaza over the long term.

Under this alternative, traffic backups would likely increase over time along the streets and at intersections near the plaza. This may indirectly affect the travel patterns of people living in the vicinity of the plaza, as they try to avoid the areas of congestion. However, it does not appear that the affect on traffic patterns would be significant.

There is the potential for some increase in certain air pollutants over time such as particulate matter, due to increased traffic congestion. **Section 3.9 Air Quality** discusses the impact of air pollutants for each alternative.

Overall, the No-Build Alternative would not have a significant indirect impact on land use, businesses, traffic patterns, farmland, or wetlands.

*City East Alternative:* The City East Alternative would expand the existing plaza area and bring most of the plaza down to street level. Pine Grove Avenue would be rerouted to the east and several intersections in the vicinity would be rebuilt. This alternative would require the relocation of 34 businesses. It is highly likely that some of these businesses would relocate in the general area of the plaza to serve local and plaza traffic. This induced growth would probably occur north of Hancock Street, between the M-25 Connector and Pine Grove Avenue. This area is currently zoned for business use so land use patterns would not be affected. There are vacant or under-used sites in this area north of Hancock Street. New business growth could also occur along the combined Pine Grove Avenue/10<sup>th</sup> Avenue and along Pine Grove Avenue south of the project. This business growth could cause pressure to convert the first block of neighboring houses to commercial use provided local zoning was changed to allow it.



Traffic backup on I-94/I-69





Chippewa Middle School

The 155 homes relocated for the City East Alternative could result in a short-term effect on enrollment and funding for the Port Huron Area School District. The Study Team estimates that approximately 80 school-aged children live in the homes that would be relocated. This represents approximately 0.7 percent of the total enrollment of the district. If these families relocate outside of the district, the project would cause a loss of enrollment and funding for the district. The Port Huron Area School District encompasses a fairly large area including Fort Gratiot Township to the north and Port Huron Township to the west. It is likely that families who wish to remain in the area would remain in the school district. The Draft Relocation Plan, located in **Appendix B**, indicates that there is ample available and suitable replacement housing for families who wish to remain in the area. The relocation of these families could also affect enrollment patterns and boundaries for individual schools, specifically Crull Elementary and Garfield Elementary, which are the closest schools to the neighborhood. Though both Crull Elementary and Garfield Elementary have capacity to accept new students, without enrollment boundary changes, they will most likely lose students.

The City East Alternative may have minor indirect impacts due to reduced access for border crossing traffic at Water Street and increased access between the interstate and Lapeer Road via the enhanced, Lapeer Connector. The Lapeer Connector is currently a limited access route and will continue to be a limited access route. These minor changes to the road network are unlikely to cause major changes in development and use or indirect impacts to farmland, wetlands and other natural resources.

The proposed improvements to I-94/I-69 may cause some motorists heading to Canada to bypass the services currently available at the Water Street Interchange. Motorists headed to Canada will be directed into separated lanes that lead directly to the Blue Water Bridge prior to the Water Street Interchange. This is being done to reduce traffic conflicts between local traffic and border crossers. Border crossing traffic will still have the option to access the Water Street Interchange via the lanes for local traffic and could then use Pine Grove Avenue to access the bridge plaza. However, motorists unfamiliar with this particular border crossing would be unaware of this

option to access Water Street. There would still be full access to Water Street for local traffic and border crossers coming from Canada in the same manner that exists today. As a result, the indirect effect on development at Water Street would be minor.

The City East Alternative will include enhanced access to the Lapeer Connector for local traffic. Currently only traffic headed to I-94/I-69 east or from I-94/I-69 west can use the Lapeer Connector. With the City East Alternative, traffic headed in all four directions would be able to use the Lapeer Connector. As driveway access along the Lapeer Connector is restricted due to it being limited access, this increase in traffic is unlikely to cause any new development along the Lapeer Connector. The Lapeer Connector provides a 0.8 mile connection between I-94/I-69 and Lapeer Road. The increase in traffic may slightly increase the potential customer base for existing businesses along Lapeer Road.

The minor traffic pattern changes caused by the City East Alternative should have minimal affects on land use patterns and development at the potentially affected interchanges along I-94/I-69. The City East Alternative does not increase access to or direct large traffic flows to locations with undeveloped land. As a result of the minor traffic pattern changes, a small number of drivers may switch the location for their gas or meal purchases between the various interchanges in the vicinity of the I-94/I-69 Corridor but there is unlikely to be enough change to sustain new businesses or development. No indirect impacts on land uses, wetlands, farmland and other natural resources are expected with the City East Alternative.

*City West (Preferred) Alternative:* The City West Alternative would expand the existing plaza area and bring most of the plaza down to street level. Pine Grove Avenue would be relocated to the west and several new intersections would be built along the relocated roadway. This alternative would require the relocation of 30 businesses. It is highly likely that some of these businesses would relocate in the general area of the plaza to serve local and plaza traffic. This induced growth would probably occur north of Hancock Street. The relocated Pine Grove Avenue provides new frontage access to existing



Pine Grove Avenue looking north towards plaza

vacant or underutilized business locations north of Hancock Street. This may be an attractive location for new or relocated businesses, providing some revitalization to the blocks north of the plaza. Most of this area is currently zoned for business use; however, the induced business growth could cause pressure to convert more of this area to commercial use provided local zoning was changed to allow it. In addition, new business growth could also occur along 10<sup>th</sup> Avenue and along Pine Grove Avenue south of the project. This business growth could cause pressure to convert the first block of neighboring houses to commercial use as well, provided local zoning was changed to allow it.



Pine Grove commercial corridor

The City West Alternative may indirectly affect traffic patterns by allowing people the option to take alternate routes, such as the rerouted Pine Grove Avenue or 10<sup>th</sup> Avenue, around the plaza facility. However, this affect is not expected to be major. All of the Build Alternatives will likely have a positive indirect effect on the Canadian side of the border crossing, in Sarnia, Ontario. These proposed alternatives will reduce stress on Canadian resources, in particular, the Ontario Provincial Police, by reducing traffic backups and associated law enforcement oversight on Highway 402.

The 129 homes relocated for the City West Alternative also could result in a short-term effect on enrollment and funding for the Port Huron Area School District. The Study Team estimates that approximately 70 school-aged children live in the homes that would be relocated. This represents approximately 0.6 percent of the total enrollment of the district. If these families relocate outside of the district, the project would cause a loss of enrollment and funding for the district. The Port Huron Area School District encompasses a fairly large area including Fort Gratiot Township to the north and Port Huron Township to the west. It is likely that families who wish to remain in the area would remain in the school district. The Draft Relocation Plan, located in **Appendix B**, indicates that there is ample available and suitable replacement housing for families who wish to remain in the area. The relocation of these families could also affect enrollment patterns and boundaries for specific schools, specifically Crull Elementary and Garfield Elementary, which are the closest schools to the neighborhood.

The City West Alternative may have minor indirect impacts due to reduced access for border crossing traffic at Water Street and increased access between the interstate and Lapeer Road via the enhanced Lapeer Connector. These impacts are identical to those for the City East Alternative. These minor changes to the road network are unlikely to cause major changes in development and use or indirect impacts to farmland, wetlands and other natural resources.

The proposed improvements to I-94/I-69 may cause some motorists heading to Canada to bypass the services currently available at the Water Street interchange. Motorists headed to Canada will be directed into separated lanes that lead directly to the Blue Water Bridge prior to the Water Street. This is being done to reduce traffic conflicts between local traffic and border crossers. Border crossing traffic will still have the option to access the Water Street Interchange via the lanes for local traffic and could then use Pine Grove Avenue to access the bridge plaza. However, motorists unfamiliar with this particular border crossing would be unaware of this option to access Water Street. There would still be full access to Water Street for local traffic and border crossers coming from Canada in the same manner that exists today. As a result, the indirect effect on development at Water Street would be minor.



Water Street off-ramp

The City West Alternative will include enhanced access to the Lapeer Connector for local traffic. Currently only traffic headed to I-94/I-69 east or from I-94/I-69 west can use the Lapeer Connector. With the City West Alternative, traffic headed in all four directions would be able to use the Lapeer Connector. As driveway access along the Lapeer Connector is restricted, this increase in traffic is unlikely to cause any new development along the Lapeer Connector. The Lapeer Connector provides an 0.8 mile connection between I-94/I-69 and Lapeer Road. The increase in traffic may slightly increase the potential customer base for existing businesses along Lapeer Road.

The minor traffic pattern changes caused by the City West Alternative should have minimal affects on land use patterns and development at the potentially affected interchanges along I-94/I-69. The City West Alternative does not increase access to or direct large traffic flows to locations with

undeveloped land. As a result of the minor traffic pattern changes, a small number of drivers may switch the location for their gas or meal purchases between the various interchanges in the vicinity of the I-94/I-69 Corridor but there is unlikely to be enough change to sustain new businesses or development. No indirect impacts on land uses, wetlands, farmland and other natural resources are expected with the City West Alternative.

*Township Alternative:* The Township Alternative includes a secured roadway corridor from Blue Water Bridge to the proposed plaza, located west of the existing Water Street and I-94/I-69 Interchange. Unless travelers choose to turn around and go back to Port Huron after being inspected, they will bypass the services available in the blocks surrounding the existing plaza and at Water Street. The interchanges at Range Road and I-94, and Wadhams Road and I-69 will become the first opportunity for travelers to exit the interstate after leaving the plaza when heading west or south.



Commercial properties  
around the Range and  
Wadhams Road interchanges

Range Road is the boundary between Kimball Township to the west and Port Huron Township to the east. The land immediately east of the Range Road and I-94 Interchange is zoned for commercial uses. The land immediately west of this interchange is zoned for light industrial and agricultural uses. The future land use designation for property west of the interchange is commercial. **Section 3.7.1 Why Do We Look at Existing Conditions and Development Trends?** describes the types of land uses at this interchange.

The Wadhams Road and I-69 Interchange has a mix of land uses. **Section 3.7.1 Why Do We Look at Existing Conditions and Development Trends?** describes the types of land uses currently located at this interchange. The northwest and southeast quadrants of the interchange are zoned commercial. The northeast quadrant is zoned light industrial and the southwest quadrant is zoned medium-density residential. The future land use designation for property north of the interchange is commercial and industrial, and south of the interchange is medium-density residential.

It is likely that both of the above interchanges will experience some commercial growth, to take advantage of their closer



proximity to the proposed plaza. The types of new businesses that would locate at the interchanges would likely be similar to the existing businesses, such as, fast food restaurants, gas stations, etc. Existing zoning and future land use plans would accommodate this potential growth. A potential indirect impact will be the acceleration of new development. It is likely that new businesses will locate near these interchanges sooner, if the Township Alternative is built than for other alternatives.

The Township Alternative may indirectly affect potential wetlands located near the Range Road and I-94 Interchange. Wetlands located near the Range Road exit consist mainly of forested wetlands with some emergent wetlands and some open water areas (see **Figure 3.7.3**). The Township Alternative would encourage new commercial development which, in turn, could affect wetlands in the area. Any wetland impacts would be subject to the permitting regulations that exist at the time of the impacts. There are vacant existing commercial sites at the Range Road Interchange. If development were directed to reuse of the vacant developed property, indirect wetland impacts would be minimized.

The Township Alternative could have a similar indirect effect on wetlands located near the Wadhams Road Interchange with I-69. Wetlands located near this interchange also consist mainly of forested wetlands with pockets of emergent wetlands and a few open water areas (see **Figure 3.7.2**). The Township Alternative would encourage new business construction, which in turn could affect wetlands. As with Range Road, there are vacant existing commercial properties along Wadhams Road near the interchange where new development could be directed. This would minimize additional wetland impacts.

The Township Alternative may indirectly affect traffic patterns by encouraging people to take alternate routes, such as the Lapeer Connector, into downtown Port Huron.

The 56 homes relocated for the Township Alternative could result in a short-term effect on enrollment and funding for the Port Huron Area School District. The Study Team estimates that approximately 30 school-aged children live in the homes



**Outlet Mall located on Range Road**

that would be relocated. This represents approximately 0.3 percent of the total enrollment of the district. If these families relocate outside of the district, the project would cause a loss of enrollment and funding for the district. The Port Huron Area School District encompasses a fairly large area including Fort Gratiot Township to the north and Port Huron Township to the west. It is likely that families who wish to remain in the area would remain in the school district. The Draft Relocation Plan, located in **Appendix B**, indicates that there is ample, available and suitable replacement housing for families who wish to remain in the area. The relocation of these families could also affect enrollment patterns and boundaries for specific schools, specifically Crull Elementary and Garfield Elementary, which are the closest schools to the neighborhood. The potential effect for the Township Alternative on enrollment at these schools would be lower than for the City East and City West Alternatives.

The Township Alternative will include enhanced access to the Lapeer Connector for local traffic. With the Township Alternative, traffic headed in all four directions would be able to use the Lapeer Connector. As driveway access along the Lapeer Connector is restricted, this increase in traffic is unlikely to cause any new development along the Lapeer Connector. The Lapeer Connector provides an 0.8 mile connection between I-94/I-69 and Lapeer Road. The increase in traffic may slightly increase the potential customer base for existing businesses along Lapeer Road.

There is no agricultural land in the Study Area that is either currently farmed or zoned for agricultural purposes. Township Alternative will not have a significant indirect impact on farmland.

### **3.7.5 What are Transboundary Effects?**

Agencies must analyze indirect effects of the project on the Canadian side of the border including potential effects on growth, safety, human and natural resources, as well as cumulative effects. Environmental regulations require the Study Team needs to discuss whether the plaza expansion would result in any positive or negative impacts within Canada.

### 3.7.6 Does the Project have any Transboundary Effects?

All Build Alternatives will likely have a positive indirect effect on the Canadian side of the border crossing, in Sarnia, Ontario. The Build Alternatives may reduce stress on Canadian resources, in particular, the Ontario Provincial Police, by reducing traffic backups and associated law enforcement operations on Highway 402. The Build Alternatives will also reduce delay for Canadians waiting to enter the United States.

The Canadian Blue Water Bridge Authority (BWBA) is in the early stages of a total reconstruction of their border plaza. The BWBA recognizes the need for expanded border operations at the Blue Water Bridge and are in strong support of the expansion of the U.S. border plaza.

As discussed in **Chapter 2**, there currently is an undesirable truck weave that takes place on the main bridge. The westbound trucks are required to be on the right side as they pass through the Canadian toll booths and then switch over to the left lanes for inbound primary inspection on the U.S. Plaza. The Canadians have indicated the weave needs to be eliminated with the construction of the new U.S. plaza to provide safer travel conditions.

Only the No-Build Alternative will result in a negative transboundary effect, as it does not fix the mid-span truck weave. In addition, the traffic backups on the Highway 402 will continue to occur and result in unsafe conditions. All of the Build Alternatives will likely result in positive indirect effects on the Canadian side of the crossing by reducing the traffic backups that are currently occurring and by fixing the mid-span truck weave.

The Build Alternatives will not affect environmental resources in Canada but could result in reduced localized air quality impacts and use of fuel due to less congestion on the Canadian side of the bridge from cars and trucks waiting to enter the United States.



### 3.7.7 How did the Study Team Determine if the Alternatives would have Cumulative Effects?

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#### What Are Cumulative Effects?

Effects that result when adding the impacts of a project to other past, present, and future projects.

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Environmental regulations require that the cumulative effects of a proposed action or project be evaluated. Cumulative effects are those effects that result when adding the incremental impacts of a project to other past, present, and foreseeable future projects. The incremental impacts of a project may be minor. However, when these impacts are added to impacts from other projects, the overall impact could be considerable. Cumulative impacts can be positive or negative depending on the environmental resource being evaluated.

In general, a particular action or group of actions would be included in the cumulative analysis, provided:

- The impacts occur in a common area
- The impacts are similar in nature
- The impacts are long-term

Projects considered in this cumulative analysis consist of past, present, or future transportation and land development projects, and projects directly associated with the development of the plaza. The time frame for considering past, present, and future projects is from 1980 to 2030. Using 1980 as the starting point for the analysis allowed an assessment of the changes since the last major expansion of the plaza. The year 2030 is the year used in the regional transportation documents. Also, it would accommodate the build-out of any planned improvements to the plaza.

Comprehensive plans for the Townships of Port Huron and Fort Gratiot, and the City of Port Huron were reviewed to identify future actions that could have cumulative impacts. Also, the 2030 Long Range Transportation Plan, prepared by the St. Clair County Transportation Study, was reviewed for any major transportation projects that may have cumulative effects.

The following additional documents were reviewed:

- St. Clair County 2030 Long Range Transportation Plan / SEMCOG Long Range Plan
- City of Port Huron Master Plan Summary
- Charter Township of Port Huron Zoning Ordinance and Zoning Map
- St. Clair County GIS Data
- 2000 U.S. Census Data
- SEMCOG Demographic Data, estimates, and forecasts
- 1983 I-94 Blue Water Bridge and Plaza FEIS and Section 4(f) Statement
- 1994 Blue Water Bridge Additional Capacity Project Environmental Report and Reevaluation of 1983 FEIS
- Detroit River International Crossing Study (DRIC) - in progress, currently in the alternatives evaluation phase
- Proposed improvements to Highway 402 in Ontario

To evaluate the effects of the proposed project in terms of cumulative impacts, past, present and reasonably foreseeable future actions need to be assessed. Past actions are documented in the records. Future actions that may have potential cumulative effects were identified by reviewing plans and ordinances for the area. Meetings were held with the City of Port Huron staff and the Port Huron Township Board to identify current development projects that might be included in the analysis.

The following projects were considered in the evaluation of potential cumulative effects:

- Past Blue Water Bridge and Plaza construction in the 1990's
- Anticipated improvements along I-69 and I-94 south and east of the project
- Other border crossing projects in the Detroit area
- Current development in projects in the Port Huron area including the Acheson Ventures development

### **3.7.8 Are There any Cumulative Effects?**

Upon reviewing potential projects to be included in the cumulative analysis the Study Team determined that the only

projects with long-term cumulative effects are the various plaza and related improvements over time.

Cumulative impacts to the community and neighborhoods, as a result of past plaza development activity include residential and business displacements and neighborhood fragmentation. Bridge and plaza improvements completed by 1994 resulted in the relocation of 33 residential units and six businesses. These displacements removed part of an existing neighborhood and affected the cohesive nature of the neighborhood and surrounding area.

The Study Team also identified potential short-term cumulative effects for all Build Alternatives if border crossing projects in Detroit and improvements along I-69 and I-94 outside the Study Area were constructed at the same time as the plaza project. The cumulative effect of construction of all of these projects at the same time would be substantial congestion for border crossing traffic and trade entering Michigan. There would also be a potential shortage of construction resources for these types of projects, raising project costs. These short-term cumulative effects can be reduced or eliminated by scheduling the various construction projects at different times over a period of years.



Homes in the Neighborhood  
South of the Existing Plaza

No-Build Alternative: The No-Build Alternative would not affect existing neighborhoods and, thus, would not result in a cumulative impact on the community and neighborhoods.

City East Alternative: The City East Alternative would require the relocation of 155 residences, 34 businesses, and one church. The relocations would affect two neighborhoods located south and north of the plaza, by reducing their size and impacting the cohesive nature of the neighborhoods and surrounding community. The proposed relocations, in combination with past relocations since 1980, would result in a significant cumulative impact. The cumulative effect would be the relocation of 188 residences and 40 businesses since 1980. There is also a cumulative effect on the tax base for the City of Port Huron.

City West (Preferred) Alternative: The City West Alternative would require the relocation of 137 residences, 37 businesses, and one church. The relocations would affect the same two

neighborhoods located south and north of the plaza as the City East Alternative, by reducing their size and impacting the cohesive nature of the neighborhoods and surrounding community. The proposed relocations, in combination with past relocations since 1980 and the proposed relocations due to the I-94/I-69 Corridor project, would result in a significant cumulative impact. The cumulative effect would be the relocation of 170 residences and 43 businesses since 1980. There is also a cumulative impact to the tax base of the City of Port Huron.

*Township Alternative:* The Township Alternative would require the relocation of 56 residences and 29 businesses. Twenty-four of the 56 residential units to be relocated are in the same condominium complex. Also, the remaining residential units to be relocated are at the edge of an existing neighborhood, reducing the impact on the neighborhood, in comparison to the City Alternatives. However, from a cumulative standpoint, the Township Alternative would still have a significant impact due to its contribution toward the displacement of 89 residences and 35 businesses since 1980.



**Riverside Drive condominium  
complex**